Perceived work uncertainties and expectancy-value as predictors of postgraduate intentions in the transition to work among Ghanaian graduates

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Acronyms

NGO	Non Governmental Organization
MNC	Multinational Companies
ICT	Information and Communication Technologies
UNCTAD	United Nations Conference on Trade and Development
UN	United Nations
YEN	Youth Employment Network
GDP	Gross National Product
ILO	International Labor Organization
GSS	Ghana Statistical Service
WAEC	West African Examinations Council
GCE A-Level	General Certificate of Education Advanced Level
GCE O-Level	General Certificate of Education Ordinary Level
HND	Higher National Diploma
NSS	National Service Secretariat
HBCU	Historically Black Colleges and Universities
PWI	Predominately White Institution
MSALT	Michigan Study of Adolescent and Adult Life Transitions
MBA	Master of Business Administration
TRA	Theory of Reasoned Action
GLOBALIFE	Life Courses in the Globalization Process
OST	Office of Science and Technology
EFS	Enterprise Feedback Suite
VOE	Value of Education Scale
SPC	Selective Primary Control
SSC	Selective Secondary Control
CPC	Compensatory Primary Control
CSC-P	Compensatory Secondary Control - Protection
CSC-D	Compensatory Secondary Control – Disengagement
CGPA	Cumulative Grade Point Average
SES	Socioeconomic Status
FIML	Full information maximum likelihood estimation

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1 Introduction

This dissertation investigates, longitudinally, the transition out of the university of Ghanaian tertiary graduates. The research stands at the intersection of a number of research paradigms, concepts and models that are used extensively in psychology research and in the present situation have been combined in a single research investigation. The goal is to investigate whether graduates perceived social change-related uncertainties influence their further education and work plans and whether these plans change over the course of the year–long transition out of the university.

In investigating the transition of tertiary students out of the university, the present work taps into a vast repertoire of school-work transitions research. Transitions are periods between two relatively stable periods of an individual's life when they experience major changes and perhaps some instability (Lenz, 2001). These periods are regarded as highly sensitive periods because the interplay between contextual and individual level influences are heightened (Haase, 2007). Research shows that individuals have more room to direct and shape their own development during transitions than other periods, within limits of course (Evans, 2007). Different levels of transitions have been studied, for instance, transitions during school (e.g., Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, & Mac Iver, 1993), transitions to marriage and parenthood (e.g., Salmela-Aro, Nurmi, Saisto & Halmesmäki, 2001), transitions in old age (e.g., Kling, Ryff, Love, & Essex, 2003), and school to work transitions.

School to work transitions are one the most often studied transitions perhaps because work remains one of the central developmental tasks and an important marker of adulthood. In the literature, the term "school to work" transitions typically refers to the transition from secondary level education to work, with more research focused on this level than, for instance, on the transition from university to work. This however means that there are fewer empirical researches on the transition from university to work with most of the literature in this area coming from non-developmental psychology fields and from NGO reports and surveys (Blossfeld, Klijzing, Mills, & Kurz, 2005; Haase, 2007). The present study, by *transitions*, refers to the transition out of the University after the Bachelors Degree to work or further (postgraduate) education. A longitudinal design is used to study respondent's further education intentions across

the transition period. This period is quite protracted in Ghana due to a compulsory, year-long, non-military, national service duty that all tertiary graduates must perform.

Currently, researchers agree that school to work transitions have become more difficult, fragmented, complex, prolonged and uncertain than those in previous generations (Arnett, 2000; Blossfeld et al., 2005; Leggatt-Cook, 2005). Consequently, fewer young people are able to accomplish a smooth and easy transition (Kellock, 2005; Mortimer, 2003). These trends have been mostly attributed to globalization and societal change which involve movements such as increased international competition and the push towards the knowledge economy. These have direct bearing on prolonged education and school-to-work transitions (Beck, 2009; Heinz, 2003; Perrons, 2004). Although Ghana is not a postindustrial society, it has not remained untouched by global social and economic trends, which will be discussed in more detail below and which provide the context for understanding the challenges affecting young Ghanaians' transition out of the university.

In the present work, *social change* is used to refer to social, economic and political changes specific to a given society, whereas *globalization* refers to one of the sources of social change. The changes brought about by globalization are perhaps most pronounced on the labor market. And the impact of these globalization-led labor market changes on youth has received much attention because the changes are thought to be more risky for them as labor market entrants (Blossfeld, 2005; Leggatt-Cook, 2005). Faced with the highly uncertain youth labor market, young people are often choosing to delay working life and stay in education longer in order to improve their chances of success. Work is one of the central developmental tasks of adulthood and failure to make a successful early transition to working life has been associated with a long-term risk of social and economic marginalization (Kellock, 2005). This has mostly been true of lower level (e.g. secondary school level) transitions. Currently, many young people use this delay as an opportunity to acquire more education and training and consequently emerge at a higher work and income bracket. Nonetheless, they still face uncertainty and unemployment concerns, at least in Ghana, with the realization that they are still unable to find jobs suited to their qualifications. The delaying of entry into the labor market and prolonging of the transition period has other consequences such as creating a situation of "ambiguous dependency" (te Riele, 2004: 244) on parents and also delaying participation in other areas of adult life. The scope of these effects has led to theorists debating on whether this represents a new stage of lifespan

development, the emerging adulthood stage (Arnett, 2000). Although the emerging adulthood theory pertains to youth in the developed world, similar and even more pronounced challenges and uncertainties are faced by youth in the present context as well.

Obviously the issue of globalization is complex and to capture this complexity at the individual level, the present research utilizes the Jena Model of Social Change and Human Development. This theory is born out of the reasoning that the objective manifestations of macro level social change are important but not as important as the individual's subjective perceptions of such manifestations when it comes to predicting important psychological outcomes. This reasoning serves as a departure from the previous studies of social change where the focus was on aggregate data and cohort comparisons (Silbereisen & Wiesner, 2000). The Jena model outlines the process by which the macro level societal factors can trickle down to the individual level after being sieved through several institutions which act as filters, such as the organizations involved in education, training, and work (Silbereisen, Pinquart, Reitzle, Tomasik, Fabel & Grümer, 2006). The model assesses the individual's perceived level of uncertainties in different domains of life, termed as *demands.* These *demands* interact with the individual's *resources* and *coping strategies* to influence different psychological and behavioral outcomes. In the present research, the Jena model is utilized to investigate whether the respondents perceived level of uncertainty is associated with their career and further education intentions after completing the university.

The present investigation also utilizes a contemporary model from the achievement motivation research tradition, the expectancy-value model (Eccles et al, 1993). This is based on the premise that an individual's choice of a task, in this case furthering their education, is predicted by success *expectations* and the personal *value* of the task. The expectancy and value constructs, as far as we know, are being investigated for the first time in the Ghanaian context. Here, the goal is to investigate whether expectancies, defined as the perceptions of the probability of success in either work or further postgraduate education, and subjective task values, measured as the personal importance of either activity, are proximal predictors of postgraduate intentions and mediate the relationship with perceived labor market uncertainties. The present investigation also borrows from the theory of implementation intentions (Gollwitzer, 1990; Heckhausen, 1991) and assesses postgraduate implementation intentions, which are the plans already in place, rather than mere postgraduate intentions. This is because intentions have been found to be an

insufficient predictor of behavior. The construct of *implementation intentions* comes from a history of the theories of planned behavior and reasoned action (Ajzen, 1988; Fishbein & Ajzen, 1975). These theories seek to determine the mechanisms that go from making a decision to behavior. These varied theories are brought together in a single model to answer the present research questions.

The present study is theoretically and practically relevant for several reasons. First, as mentioned above, labor market uncertainties hinder the smooth transition to work, and such uncertainties may vary between contexts, with each context presenting unique sets of constraints. It is therefore important to investigate how such uncertainties influence postgraduate decisions in different contexts. Since research on the transitions of youth in times of social change has largely been restricted to youth in western societies, this study contributes to the understanding of the factors behind postgraduate and work intentions of tertiary students in a non-western context. These findings, although specific to the sample investigated, can tentatively provide an idea of the conditions of similar populations in other countries in the region given the similarities between the countries of the West African sub-region. This tertiary graduate population, although not the most disadvantaged, are important for practical and research purposes, because they represent the future leaders of the continent. This understanding would be useful to tertiary educational institutions, policy makers concerned with the university to work transition, and also to the students themselves.

Second, this study successfully applied the expectancy value model of achievement motivation by Eccles et al., (1993) and the Jena model of social change and human development by Silbereisen et al., (2006) in an African context. To the best of our knowledge these constructs have not been previously used in research in the sub Saharan region. We showed that subject to a few modifications, the instruments used to assess these constructs are as valid in this context as in the contexts in which they were developed. Thus, these constructs are applicable to young Ghanaians' situation. In merging the two models, this study also adds independent support to the association between social change-related factors, achievement motivation and postgraduate education intentions. Although there has been a lot of theorizing about societal changes influencing prolonged education, there has been relatively little empirical investigation to support this link.

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The thesis is structured in the following way: In Chapter 2, an overview of globalization and social change as it pertains around the globe and to Africa and Ghana is given. Next, information about the Ghanaian political, economic and educational contexts and changes that have occurred in the last few decades is provided. Then, there is a description of the roots, constructs and research evidence of the theories that structure the present investigation (a) the Jena model of social change and human development, (b) the Eccles et al., expectancy-value model of achievement motivation and (c) the implementation intentions theory. Finally the chapter ends with an outline of the aims of the study and the research questions and hypotheses that guided the investigation.

Chapter 3 presents the methodology of the research and starts with a brief discussion of ethical and sampling considerations in the present research. Next is a description of the sampling techniques and procedures used in both pilot and main studies. Finally, there is a description of the different scales that make up the questionnaire. Chapter 4 starts with an account of the statistical approaches used on all data analyses. The results of these analyses will be presented according to the research questions and hypotheses put forward. In the final chapter, there is an in-depth discussion of findings. Limitations of the study are also discussed as are some ideas for future research, and, finally, some potential applications of the findings are considered.

2 Theoretical background and prior research

2.1 Globalization, social change as it presents around the globe and in Africa

Social change refers to change in the typical characteristics of a society, such as its political system, social institutions, and cultural products (Calhoun, 1992; Endruweit, 1989). Social change can be gradual, long-lasting process of ideological, technological, and economic change within a society, or an abrupt change of societal conditions based on historical events such as political revolutions or technological breakthroughs that reorient large segments of the economy (Pinquart, Silbereisen & Juang, 2004). Social change has different sources and tendencies, with arguably the main source being Globalization summarized as "the global circulation of goods, services and capital and also of information, ideas and people" (World Bank, 2000, 3). Descriptively globalization is a summary term for ongoing processes (van Binsbergen, van Dijk & Gewald, 2003) and is often used to refer to the growing interconnectedness and interdependencies between countries, communities and regions of the world. Globalization primarily manifests itself economically but there are also cultural and environmental dimensions which are closely interlinked. To reduce their complexity, Mills & Blossfeld (2005) condensed globalization processes under four structural mechanisms that would also be useful for the purposes of the present study.

The first of these mechanisms is the swift internationalization of markets, a worldwide trend towards removing obstacles to the free exercise of economic activity across national borders (van Binsbergen et al., 2003; Perrons, 2004; Scholte, 2000). These changes have been headlined by international organizations such as the International Monetary Fund, World Trade Organization and the World Bank (Mills & Blossfeld, 2005; Montanari, 2001). This trend has led to a decline in national borders and the growth of large multinational companies (MNCs). The second mechanism refers to the rapid intensification of competition, aided by fast paced flow of money, ideas, goods and people around the world (Perrons, 2004). Consequently, companies are forced to evolve by diversifying operations such as, product development, manufacturing and sales across continents. The third mechanism represents the acceleration and diffusion of knowledge via new information and communication technologies (ICTs) allowing instant transmission of ideas, goods and services and to some extent, rendering physical space and distance irrelevant (Mills & Blossfield, 2005). The fourth mechanism refers to the rising importance of markets in almost all societies. The global markets are increasingly reactive and

dynamic, which makes them difficult to predict and therefore increases global uncertainty about economic and social developments.

The impact of these trends on the African continent has been debated and mostly deemed negative. For instance, the internationalization of markets was aimed among others to integrate the previously 'isolated' nations into the world economy, but Africa has largely been and continues to remain economically isolated. The large gains expected from these trends have been limited because international trade continues to be largely concentrated in developed countries. For instance, most of the top MNCs with largest foreign assets are from countries like the United States, Japan, the United Kingdom, France and Germany. Although the poorest 49 countries make up 10% of the world's population, they account for only 0.4% of world trade, and the disparity between advanced and developing economies keeps growing (United Nations Conference on Trade and Development (UNCTAD), 1999). Countries in sub-Saharan Africa are mostly ill positioned to take advantage of the opportunities offered by globalization due to obstacles brought about by inadequate educational provision, widespread health problems, excessive population growth, and low population welfare levels, which prevents them from attracting the foreign investment necessary for development. Other factors, such as large international debts, high military expenditure, weak government structures, and endemic corruption, also inhibit healthy development. Consequently, these countries are increasingly marginalized from the rest of the world economy, which leads to the seeming paradox of globalization, whereby, on the one hand, people and places around the world are increasingly interlinked and involved in highly interactive global networks, but on the other hand, there are increasing differences among societies and widening inequality (Perrons, 2004). Therefore, although globalization has been associated with positive developments in some regions of the world, it has also been linked to the significant marginalization of many poorer (African) countries (Stalker, 2000).

2.2 Political, economic and social change, influence of globalized trends, the context of Ghana

Ghana is a country of approximately 25 million inhabitants (as of 2011) covering a land mass of about 238,537 square kilometers, a few degrees north of the Equator, on the Greenwich Meridian

and located in western part of Africa. Of the total population, the youth aged between 15 and 34 accounts for about 33.2%. Ghana has experienced rapid urbanization, particularly over the last 20 years. The rate of growth of the urban population is estimated at about 4.6% per year between 1984 and 2000 whilst the entire population has grown at an average of less than 3% per year (Boateng & Ofori-Sarpong, 2002; Youth Employment Network (YEN), 2009).

Ghana's political and economic history has been unstable but has also reflected the influence of globalization forces (Booth, Crook, Gyimah-Boadi, Killick, Luckham, & Boateng, 2005). Before independence in 1957, Ghana was known as the Gold Coast, adopting the name Ghana after independence. The history of Ghana today is usually reckoned from the arrival of the Europeans in the 1400s with the Portuguese being the first to make contact with the then Gold Coast at around 1470. The British took control of the Gold Coast in 1821, and in 1844 the Gold Coast legally became a British colony (Gyimah-Boadi, 2004). The Ghanaian constitution was approved in April 1954, and this led the way to self determination and independence in Ghana. After independence, Ghana's political landscape is not that different from many African and South American countries. By 1966 the government was overthrown in a coup which established a new government. This was followed by several other coups over the next 3 decades with the last being in 1981. A constitutional government was instituted in 1992. Many analysts have argued that these political events were largely influenced by trends happening around the world (Booth et al., 2005) and in the last 2 decades, there has been more of a gradual societal change towards consolidating democratic rule.

Due to the instability of previous decades, Ghana's economic development was derailed in the 1970s and 80s. Several reforms and recovery programs were instituted by international bodies such as the IMF, the World Bank and other international donors during that period. The reforms were intended to liberalize the economy, deregulate and reduce the size of the public sector and privatize many public enterprises, all in a bid to reduce government control and open the markets towards globalization. These reforms were initially largely viewed as failed; however, from the late 1990s, Ghana is said to be experiencing an economic turnaround. Statistics from the last three decades indicate a steady growth of Ghana's economy with GDP growth averaging about 4.7% over the period between 1995 and 2005, increasing to about 7.3% in 2008. This average is higher than the average for Africa (3%) but a little below the rates for the most dynamic developing regions in East and Southeast Asia (between 5½% and 7½%). Ghana's

GDP stands at about US$ 39,151 million with a per capita GDP of about US$ 1,598(2012 estimate, Ghana Statistical Service, 2012). Poverty and other social indicators have also shown substantial improvement over the period, with the percentage of poor declining from 52% to under 40% and life expectancy rising from 55 to 58 years.

However these obvious gains in economic growth and improvement in overall standard of living have not translated adequately into job opportunities in the formal sector. Unemployment, specifically youth unemployment is consistently high. Unemployment rate among the youth aged 15–24 (i.e. people who have no work, are available for work and actively looking for work (International Labour Organization, 2008) was estimated at 25.6%, twice that of the 25-44 age group and three times that of the 45-64 age group. However these numbers fail to capture the depth of the situation. It happens that most young people are working, some in jobs well below their levels of qualification, but often in the informal sector which remains the only alternative for the unemployed (YEN, 2009). This sector, employing an estimated 54 % of the labour force is mainly characterized by agricultural enterprises (particularly in rural areas and dominated by males) and non-agriculture related enterprises such as petty trading (particularly in urban areas and dominated by females; Booth et al., 2005). Although there is no reliable data on the contribution of the informal economy to national output, it is estimated to be within a range of 20–40% (Baah-Boateng & Turkson 2005).

To sum up, the economic, political and social scene in Ghana over the last few decades has been characterized by gradual change. Progress is seen only when measured against the extremely bad performance of the preceding period or against the unimpressive African average (Booth et. al., 2005). Unemployment and underemployment still remain high particularly among the youth, who resort to the informal sector to make a living.

2.3 Overview of the Ghana education sector

The education system in Ghana is based largely on the British model. Education usually starts with pre-school for children from three to five years of age. Basic education is compulsory and free of charge and is made up of six years of primary school and three years of junior high school. The language of instruction is English at all levels of education except the first few years of primary school where the main Ghanaian language of the region may be used. Basic education is followed by four years of senior high school, which is neither compulsory nor free but is

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subsidized by government. For junior high school students who do not proceed to senior high school, a variety of apprenticeship and training programs and various forms of adult education are offered by private or government-run colleges. Some of the students are also directly absorbed into the workforce, especially in agriculture (Gondwe & Walencamp, 2011).

Due to significant variations in the quality of schools from rural and urban areas, collective examinations are used to maintain educational standards. The West African Examinations Council (WAEC), a consortium of five Anglophone West African Countries (Ghana, Liberia, Nigeria, Sierra Leone and the Gambia), administers these national examinations. The senior high school graduates hold the WAEC senior secondary certificate, which is equivalent to the UK matriculation standard, requiring a combination of passes at GCE O-Level or equivalent and at least two subjects at GCE A-Level or equivalent.

Higher education in Ghana is offered at universities (both private and public) and institutions for higher professional education including polytechnics. Polytechnics prepare students for practice-oriented middle-level professions and are certified with the Higher National Diploma (HND). Entry into university requires the senior high school certificate. Universities offer academic programs (bachelor, master and doctoral-level education), as well as sub-degree professional education courses (certificates and diplomas) through their affiliation with local tertiary level professional education institutions. All Ghanaian universities operate on a modular, semester system. Currently, there are seven public universities with the first founded in 1948, twenty-six private universities that have been accredited to award Bachelor's degrees, and ten public polytechnics offering three-year Higher National Diplomas in applied business and technology fields. Graduates in the Arts and Social Sciences dominate the graduate output of the Universities of Ghana. University admission is highly competitive and the need generally outstrips supply. In the past decade student populations have increased beyond the academic facilities in the tertiary institutions. Tough cut offs have to be enforced and consequently, the number of students who are qualified but unable to gain admission into the universities is high. Hence, those who do make it into the universities, the target population of this study, are very privileged compared to the rest of the population (Gondwe & Walencamp, 2011).

Table 2.1 Some summary statistics of the Ghanaian education sector.

Category	Statistic
Number of schools	
Kindergarten (2007/2008)	115,449 (of those, 28% private)
Primary schools (2007/2008)	17,315 (24% private)
Junior secondary schools(2007/2008)	9,507 (24% private)
Senior secondary schools (2007/2008)	700 (30% private)
Primary school enrolment (2010/2011)	3,866,381 (19% in private sector)
Junior secondary school enrolment (2010/2011)	1,111,338(17% in private sector)
Senior secondary school enrolment (2010/2011)	799,924 (12% in private sector)
Primary and junior secondary school attendance (2008)	86% of school-age population
Number of tertiary education institutions (2009)	
Universities	33 (81% are private)
Polytechnics	10 (all public)
Other specialized post-secondary professional education institutions	At least 130 (public and private)
Total known tertiary enrolment (private and public institutions in 2006/2007)	139,768 (of those, 34% female)
Public university enrolment (2006/2007)	88,445 (34% female)
Private university enrolment (2006/2007)	18,278 (39% female)
Tertiary level professional institution enrolment (2006/2007)	4,350 (46% female)
Polytechnic enrolment (2006/2007)	28,695 (30% female)
Education completion rates	
Primary completion rate (2007/2008)	88%
Junior secondary school completion rate (2007/2008)	68%
Senior secondary school pass rate (2007/2008)	40%

University completion rate	no statistics available
Polytechnic completion rate	no statistics available

Student-to-teacher ratios

Pre-school student-to-teacher ratio (2007/2008)	52:1
Primary school student-to-teacher ratio (2007/2008)	34.1:1
Junior secondary school student-to-teacher ratio (2007/2008)	17.4:1
Senior secondary school student-to-teacher ratio	no statistics available
University lecturer-to-student ratio	no statistics available
Polytechnic lecturer-to-student ratio	56:1

Adapted from Gondwe & Walencamp, (2011)

2.4 Ghanaian university graduates and increasing labor market uncertainties

Ghanaian youth with tertiary education are in a better position than their less educated counterparts (Adei, 2006), because tertiary education remains an important factor for escaping long-term unemployment and poverty. Sectors such as mining and banking and finance have been among the fastest growing sectors and the most relevant for graduates seeking employment. Tertiary labor is mainly employed in the formal sector, and the proportion of such employed is increasing. But with the large youth population and increasing output from tertiary institutions, the available employment opportunities are insufficient to meet this output (Boateng & Ofori-Sarpong, 2002). Hence there has been a steady rise in graduate unemployment and underemployment mainly attributed to the need for graduate labor being lower than the output from tertiary institutions. This increase in graduate unemployment has been observed in spite of the heightened migration of Ghanaian graduates to Europe, North America, and other countries in Africa and Asia. Although estimates of the number of graduates going abroad for employment, and of those returning after studies abroad, are not available, net emigration is likely to be positive (Boateng & Ofori-Sarpong, 2002).

It is argued that the perceived gap between the tertiary output and the graduate labor needs is partly caused by an oversupply of graduate labor in the subject areas that are easily

accessible, like arts and humanities, and an under-supply in areas with more vacancies, like engineering, accounting, medicine, information technology and management. Boateng and Ofori-Sarpong (2002) compared the tertiary institutions output to registered and advertised job vacancies in the decade between 1981 and 2000. They found that those with a bachelor's degree in the social sciences faced stiffer competition and hence lower chance of getting a job than their colleagues in the other fields such as engineering. Social science-related vacancies were more likely to require a postgraduate degree than other fields. The authors argued that the expanding educational enrolment coupled with the slow growth in employment opportunities had resulted in the phenomenon of "educational deepening". This is the situation where jobs that previously required workers with little education now required higher education, although the job content remained essentially the same. This has led in turn to an increasing need for higher education, as a means to avoid unemployment.

Another issue is the seeming unpreparedness of graduates for work. A research report for the Youth employment network (2009) found that potential employers are often reluctant to hire graduates because according to them, graduates lack the necessary skills needed for the workplace. Employers are reported to perceive that the educational systems, in Africa generally, do not prepare youth for the workplace, because the curriculum is mostly theoretical and outdated. Hence there is a mismatch of skills, with most educational institutions still offering courses that are no longer relevant to the current job market (YEN, 2009). This has been referred to as the "quality gap" in the labor supply and need. On the other hand, another study that interviewed human resource personnel of various Ghanaian companies revealed that they perceived the performance of recent graduates to be satisfactory (Boateng & Ofori-Sarpong, 2002).

From the graduate's perspective however, the job requirements set by employers are "unrealistic". Aside from formal qualifications, most job advertisements now ask for other accomplishments, including information technology skills, analytical skills, communication skills (in particular, English proficiency), leadership and team-player skills and a number of years of experience in similar positions. In addition, the inability to work independently with minimum supervision, lack of creativity and lack of initiative among the youth were regarded as critical barriers to employing the youth (YEN, 2009). These increased and diverse job requirements have been attributed to globalization-related change in the nature of organizations. For instance, in

reaction to worldwide technological advancement, organizations now require their potential employees to possess skills in information technology to cope with these trends.

Furthermore, in Ghana as elsewhere, as part of ongoing labour market changes where companies have to stay competitive by reducing costs, there is the increase in temporary or short term contract employment systems. The previous practice of offering tertiary graduates right out of school formal sector, waged or salaried employment that was permanent and full-time has given way to part-time, casual, temporary contracts, lower remuneration, fewer benefits and fewer opportunities for gaining skills or investing in training and education. Worldwide, it is reported that these and other non-traditional forms of work such as self-employment and holding multiple jobs are growing at a faster rate than standardised employment (Spoonley & McLaren, 2003). Since the youth as labour market entrants do not have the experience and connections that older experienced workers have, they are more strongly affected by these changes (Blossfield et al, 2005) because they tend to accept what they are offered.

Thus, although the university graduates may be better off compared to the overall work force in terms of their prospects in the formal sector, they do experience increasing uncertainties and challenges during their transition to work. The mandatory national service scheme which all tertiary graduates must complete may serve as added complication of the transition.

2.5 The Ghana national service scheme

The National Service program is a compulsory one-year service required of all Ghanaian tertiary students. The Ghana National Service Scheme is purposed to organize newly qualified University graduates referred to as National Service Personnel on national priority programs. According to the national service website, the Scheme "provides newly qualified graduates the opportunity to have practical exposure on the job, both in the public and private sectors, as part of their civic responsibility to the State. The scheme also provides user agencies the opportunity to satisfy their manpower needs and affords communities that would otherwise have difficulty in accessing mainstream development initiatives, access to improved social services through community service" (Ghana National Service Scheme (NSS), 2012).

Most of the service positions are carried out in agriculture, health, education, local government and rural development. In the 2010/2011 year (the service year follows the university academic year cycle, beginning in September and ends in August), 95.5% (88.2% in the previous

year) of personnel were placed into the public sector with the rest in the private sector. Service personnel are paid a fixed monthly non-taxable allowance. The only exemptions from the national service duty are those graduates aged forty (40) years and over at the time of the national service. Students who have to repeat university courses and those with health issues can also apply for deferment of service.

There are different variations of youth service programs in a many countries. At the international level, there is an International Association for National Youth Service made up of countries around the globe with youth service programs. These programs differ with respect to whether or not they are voluntary, military based and the age group of youth that are targeted. For instance, countries such Jamaica, South Africa, Kenya and Namibia have a voluntary service aimed at unemployed and un-enrolled youth. Israel has a mandatory male military service program that lasts for three years. Other countries like Finland have a mix of military and non-military programs. Other African countries which have national youth service programs include Nigeria, Zimbabwe and the Gambia. Nigeria offers a youth program similar to Ghana's in that it is mandatory and targeted at tertiary graduates. Among the advantages often argued for national youth service programs are that they can be a tool to teach valuable skills and reduce unemployment among the youth distracting them away from crime especially in societies with high youth unemployment. For some, youth service offers room after graduation for career exploration, their first working experience and the opportunity to make valuable work-related contacts.

However, for other graduates, the mandatory nature of the national service can place added burden on their transition out of the university. For instance, in addition to typical age-graded developmental challenges (such as marriage and starting a family), the transition out of the university comes with other challenges and adjustments. These includes finance-related adjustments (this period may mark an end to financial assistance from parents), relocating geographically (leaving campus housing, moving back in with parents, moving to national service location), and adjusting to working life. The national service adds to these challenges, by prolonging the transition, but does not provide any assurance of employment after the period. Graduates are unable to make any stabilizing decisions until after the service. A typical service experience includes, having to work under superiors with less educational background, engaging in tasks that have no relation with studies and general difficulties with fitting into a working

environment, especially as it is temporary. In effect, the mandatory national service limits individual freedom and disrupts career, further education and family plans thereby derailing the transition out of the university. In the present study, it is argued that the national service makes an already uncertain school to work transition more protracted and unstable and may be experienced in many respects as a moratorium.

2.6 The Jena Model of Social Change and Human Development

Over the last few decades, there has been increasing research interest on how social change is related to human development and the mechanism behind this relationship. Most of the interest focused on the effects of change at the group level with for instance cohort studies and comparisons between regions on the effects of the pace of change (e.g., Silbereisen & Wiesner, 2000). This approach however discounts the fact that the effects of social change do not affect all individuals to the same degree. Research focus also tended to be on one specific aspect of social change at a time although individuals usually have to face more than one aspect of social change concurrently. For instance, globalization effects include political, social and cultural changes which affect family life, education and work life among others. Research on social change shows that an individual's level of exposure to macro level social change elements varies, based on which societal institutions they are affiliated with and the amount of resources at their disposal. Their societal affiliations and resources also influence the perception of societal change and how they cope with the change. Individuals also tend to be active agents and sometimes producers of social change and not just passive recipients. In line with these, research has shown that the individual's perception of how societal changes pertain to their lives is important in predicting important psychological outcomes (Silbereisen & Chen, 2010; Pinquart & Silbereisen, 2004).

To address these weaknesses in social change research at the individual level, The Jena model of social change and human development posits to measure social change at the individual level. The goal is to understand the psychological processes that link macro-level social change with individual level adaptation and development (Silbereisen, 2005; Silbereisen, Reitzle, & Pinquart, 2005; Silbereisen, Pinquart, & Tomasik, 2010). This conceptual model (Figure 2.1) was developed based on the stress-and-coping literature (Lazarus & Folkman, 1984) and on socio-logical challenge-response models (e.g., Elder, 1974; Silbereisen, Reitzle, & Pinquart, 2005). The model provides the framework for cross-sectional and longitudinal research on individual effects

of social change. According to the model, the macro-level societal changes are carried to the individual through the various developmental contexts such as schools and workplaces. These contexts are manifested in institutions that address specific issues, such as the organization of education, training, and work. These contexts may also have an influence on the family, which is the most central micro-context for psychosocial adjustment and development of a person (Silbereisen, Pinquart & Tomasik, 2010).

The Jena model introduces the concept of *demands* of social change. Demands are the individual level manifestations of macro level changes rooted in challenges and transmitted through a filter of levels of contexts, and institutions. The demands construct represent the new claims or opportunities for negotiating one's life tasks, brought about by the changes on the societal level and their manifestations in contexts. Depending on circumstances, individuals may appraise them as threats or challenges, and may believe that they have the resources and potentials necessary to respond or not (Pinquart & Silbereisen, 2004; Lazarus & Folkman, 1984).

The model also outlines some adaptive processes that mediate and moderate an individual's efforts to overcome the demands. In the model, the interplay between demands and psychosocial outcomes involve the coping processes on the one hand, and the resources on the other. These relationships can play out in different ways. First, there may be a direct effect of perceived demands on outcomes. Second, the effect of perceived demands on outcomes can be heightened or reduced depending of the coping strategies or resources thereby buffering the effect. Third, the effects of perceived demands on outcomes may be mediated via coping and resources. The components of the model are believed to interact with each other, and may also change over time. Thus the processes summarized in the model are both developmental and dynamic across time. For the Ghana study, *work demands* was the focal point but the study also included assessment an investigation of coping strategies and social support as a resource; these constructs will be described next.

2.6.1 Work-related demands of social change: Perceived uncertainties in the labor market.
The focus of the Jena model is on the work-related demands of social change, a construct that captures the individual's sense of uncertainty about their occupational careers (Silbereisen & Tomasik, 2011). In the present context, the macro level changes to the Ghanaian labor market may be experienced by transitioning graduates in terms of a sense of uncertainty concerning their occupational careers. These uncertainties may translate into for instance, fears of unemployment

or fewer job opportunities after graduation, having to settle for a job that requires lower qualification or a temporary and unstable work contract or generally being unable to plan ones career path. These issues rooted in the current labor market changes are work-related demands that many young adults currently experience as they transition out of the university.

The relationship between perceived work-related demands and other psychological constructs has been investigated in ongoing research on the Jena model (Silbereisen et al., 2006). The model, developed in Germany has been successfully used in other contexts which have experienced different kinds and paces of societal change such as China, Italy and Poland. In Germany, this change is highlighted by the abrupt breakdown of the communist system in Eastern Germany culminating in the fall of the Berlin Wall and the unification of the country and subsequent transformation of the German society. In a short space of time, East Germans had to cope with changes such as, the transformation of the welfare system, increased uncertainty and competition associated with their work life including, the threat of rapidly increasing unemployment rates and financial strain (Pinquart & Silbereisen, 2004). The Jena study was designed to investigate longitudinally how individuals dealt with these changes at the societal level. The study assessed German adolescents and adults ($N = 2,264$; Ages 16 to 42) from four federal states (two economically prosperous states and two economically poorer states) of Germany.

Among the results obtained so far with respect to perceived work-related demands, Silbereisen and Tomasik (2011) found that the majority of the perceived demands are highly endorsed and that accumulation of demands does not significantly vary by age and gender. This means that the demands items do not discriminate with respect to age and gender. Being unemployed was associated with more highly endorsed demands as compared to the employed, and being outside the labor market was also on average associated with more demands. The explanation offered was that being employed offers a strong protection against the perceived demands of social change throughout the life-span. It provides numerous resources, which seem to reduce uncertainty in various domains of life (Tomasik & Pinquart, 2007). Being outside the labor market, however, whether voluntarily or not, is a status associated with increased uncertainty.

Figure 2.1 The Jena model of social change and human development
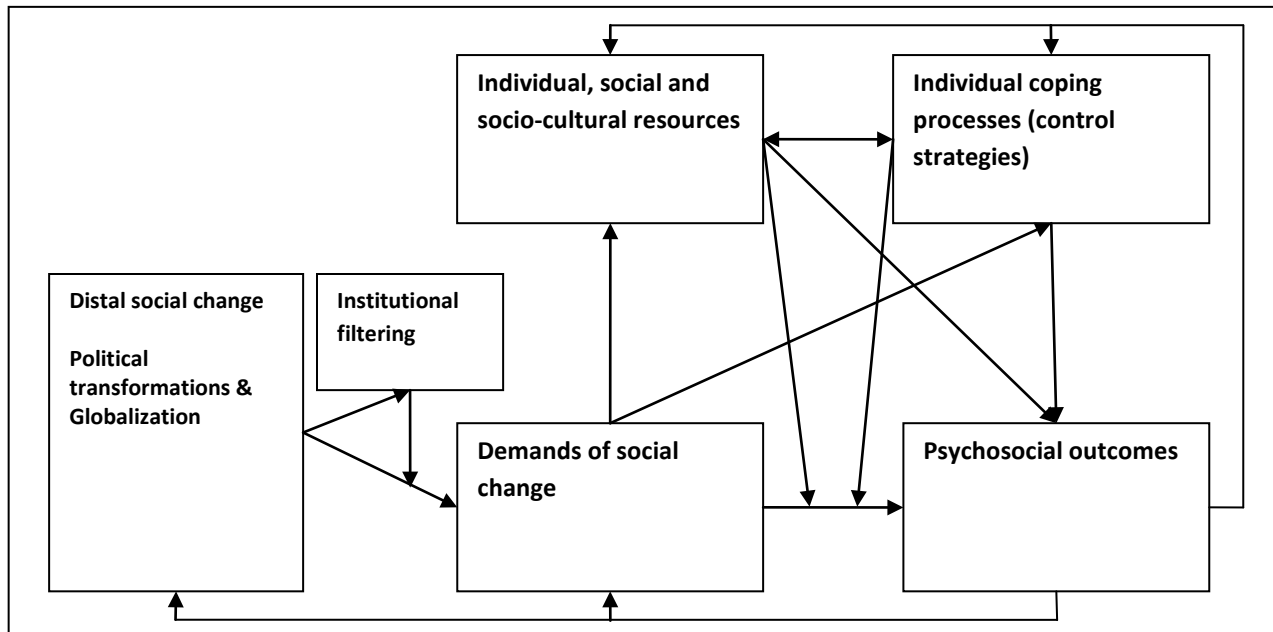
Adapted from Silbereisen et al, (2006)

Education was negatively associated with demands of social change. Being educated, like having a job, directly shields an individual from uncertainty probably because better educated people have more opportunities in the labor market and are less frequently confronted with precarious work contracts. Furthermore, education is associated with more access to information and to a higher likelihood for problem-oriented coping (Silbereisen & Tomasik, 2011). With regard to the relationship between perceived demands and career trajectories, the researchers found that individuals who perceive low demands or who endorse higher positive change-related challenges, and who display a variety of psychological assets such as personality resources, higher education and social resources, fare better in their careers and are connected to upward career trajectories (Reitzle & Körner, 2007).

Being divorced, separated or widowed was also associated with more demands as compared to being married. Being single or cohabiting did not significantly differ from being married. In terms of age effects, in the younger sample, a high load of demands was associated with lower satisfaction with life and with more depressive symptoms. The authors also found regional differences with generally East Germany and the economically weak regions reporting more perceived demands. These results most probably reflect the objective differences in regional economics, such as different rates of investments and employment, and other indicators of life

circumstances. But there was also a lot of variation within the regions with regard to the districts, which underscores the diversity of the experiences of people beyond the traditional regional divide (Silbereisen & Tomasik, 2011).

The German study on social change was replicated with a polish sample and results so far show noteworthy similarities between the two countries. Obschonka, Silbereisen and Wasilewski, (2012) examined how groups of employed individuals, differentiated by their perception of labor market uncertainties (understood as threat) and increasing job-related learning tasks (understood as positive challenge), differed in socio-demographic characteristics, psychological resources and adjustment. The authors compared German and Polish samples. Similar results were found for both countries. Respondents with a "Negative change" pattern (high uncertainty/low learning) differed from the "Positive change" group (low uncertainty/high learning) in that they showed higher levels of psychological resources (e.g., change-related self-efficacy), adjustment (e.g., work satisfaction), and socioeconomic status. Respondents with a "Complex change" pattern (high/high) mainly differed from those with a "No change" pattern (low/low) in that they showed more change related exploration. Additional analyses revealed that the "Positive change" pattern is particularly prevalent in high positions (i.e., managers and professionals). The study provided support for the assertion that increasing uncertainties were negatively associated with psychological resources and well-being.

Kim, Ng and Kim (2010) also conducted a study in Korea, replicated in Hong Kong to investigate the validity of assessing subjective evaluations of social change and its role on psychological outcomes. China and Korea in the last 2 decades have undergone rapid social and economic changes that have cascaded to the individual level. State induced economic reforms in China, for instance, have resulted in increased variations in individual and family income, massive population movements, decline in government control of social welfare and protection and rapid rise in competition (Weichold & Barber, 2009; Zhang, 2000). Korea on the other hand was one of the worst hit by the economic crises that affected many Asian countries in the 1990s. These crises led to among others, an increase in unemployment and a doubling of poverty among the Korean people (Kim & Park, 2000). Kim et al., (2010) examined the relations among people's perceptions of the pace, the scope and evaluation of these changing societal tendencies in different social domains. Their results provided confirmation about the validity of the focus on individuals' subjective experience of social change in the two contexts. First, the results from the Korea study indicated that participants perceived the three aspects of social change as

qualitatively different dimensions. Both scope and pace of social change were inversely related to the evaluation of social change. This means that the more rapidly and to a greater scope people perceived the occurring social change, the more negatively they viewed societal change. The subjective evaluation of social change was significantly related with psychological well-being and further, mediated the relationship between perceived pace and scope of social change and psychological well-being.

Findings in the Hong Kong Study generally supported the Korea Study. The participant's evaluation of the overall changes in Hong Kong was not positive in general. Perceived social changes had a significant relationship with psychological well-being. The relationship between the perceived social change and psychological well-being was mediated by the evaluation of social changes. Both studies showed that the faster and the more negatively changes are perceived, the less well-being and more ill-being is experienced. The authors concluded that the individuals' subjective experience functions as a medium to interconnect the influence of changes at the societal level with individual's psychological outcome.

The results on the perceived change-related demands from different contexts raised interesting inferences for the study in Ghana, a country undergoing a more gradual kind of societal change. On one hand, the present respondents are students transitioning out of the university. This indicates low perceived work-related demands by virtue of being students and being graduates (that is being better educated than the majority of the population). However, Ghana is an economically disadvantaged country and respondents face a very uncertain work future which has also been shown to affect individual's perceived work-related demands.

2.6.2 Coping with work-related demands of social change: The lifespan theory of control
In the Jena model, coping with social change is conceptualized against the backdrop of the life-span theory of control (Heckhausen & Schulz 1998; Schulz & Heckhausen, 1996). The life-span theory of control is a motivational theory of life-span development that captures how people adapt their behavior to age-related changes in opportunities for achievement of major life goals, such as those related to career development. The theory distinguishes between primary and secondary control. Primary control is when people are motivated to directly engage and exert control over their environment according to their needs and goals. Secondary control refers to the psychological adaptation to given environmental conditions and reflected in strategies of enhanced goal commitment or self-protection. Heckhausen and Schulz (1993) combine the

concepts of selection and compensation with the distinction between primary and secondary control with a resulting four control strategies. When facing new demands or constraints threatening their most important life goals or developmental tasks, individuals may therefore show one or more of the four groups of behaviors.

- Selective primary control (SPC) where, they may show investment of their own resources to attain their goals and to overcome barriers
- Selective secondary control (SSC), when psychological processes are utilized to help one stay motivated when facing these demands.
- Compensatory primary control (CPC). This is when individuals, confronted with problems, use external resources, such as the help from others, or try to find new and unusual ways of goal attainment
- Compensatory secondary control (CSC). This is when individuals disengage from goals if goal attainment is impossible. A second component of compensatory secondary control (CSP) is when they strive to protect themselves from negative emotional and motivational consequences of the failure (Silbereisen et al, 2006).

How do these control strategies relate to each other and to demands of social change? Results from the Jena study indicate first and foremost that consistent with other empirical studies that use the Optimization in Primary and Secondary Control model, the control strategies operate together in two dimensions made up of goal-engagement (SPC, SSC and CPC strategies) on the one hand and a goal-disengagement on the other hand (CSC and CSP that is, both disengagement and protection; Heckhausen & Farruggia, 2003). The three goal engagement control strategies represent behaviors and cognitions directed towards goal attainment whereas compensatory secondary control is geared towards goal disengagement, that is, avoiding the negative effects of failure through abandoning unrealistic goals, distancing oneself from stressors and protecting the motivational potential and emotional wellbeing of the individual (Tomasik, Silbereisen & Pinquart, 2010). Overall, results indicate that there seems to be a preference for goal engagement over goal disengagement. Other results point to significant direct effects between perceived demands of social change and all control strategies with the reasoning that higher levels of stress are generally associated with more coping efforts (Lazarus & Folkman, 1984). Tomasik, Silbereisen and Pinquart (2010) found that participants outside the labor market reported relatively less engagement and more disengagement strategies although no effects were found for

the unemployed. With regards to the role of engagement and disengagement coping in the transition to work, Haase, Heckhausen, Köller (2008) found that career-related goal engagement was important for attaining desired career goals for females who generally faced unfavorable employment opportunities but not for males. Goal engagement was in all beneficial for well-being and predicted positive among both genders.

2.6.3 Social support as a resource in coping with work-related demands
Though literature identifies a variety of coping resources, in the Jena study, the focus was on resources that help with coping with social change and a distinction is made between psychological and sociological perspectives on resources. From the psychological perspective, there were two groups of resources; psychological resources (e.g., self-efficacy, optimism) and proximal social resources such as support from relatives and friends (Pearlin, 1999). From the sociological perspective, the focus was on the role of social capital as a resource, which includes socioeconomic status and aspects of the community and the broader environment that may help to deal with stressors (Veenstra, Luginaah, Wakefield, Birch, Eyles, & Elliott, 2005). For the Ghana study, due to questionnaire space limitations and theoretical reasons, the only resource assessed was social support.

Social support is considered a coping resource, that is, a social "fund" which people may draw from when handling stressors. Social support usually refers to the functions performed for the individual by significant others, such as family members, friends, and coworkers (Thoits, 1995). The literature on social support is large with research supporting several distinctions and theoretical perspectives of the construct. For instance theoretical distinctions are made between types of social support which includes emotional (listening, reassurance), instrumental (lending money, giving a ride) and informational support (giving advice). There are also empirical distinctions made between subdivisions of social support such as perceived social support and actual received social support. Different theories also deal with the different mechanisms by which social support influences stress and coping (Schwarzer, 1991). For instance, there is the stress and coping perspective which proposes that support contributes to health by protecting people from the adverse effects of stress (Lazarus & Folkman, 1984). The social constructionist perspective asserts that support directly influences health by promoting self esteem and self regulation, regardless of the presence of stress (Lakey & Cassady, 1990; Pierce, Baldwin & Lydon, 1997). This perspective is also concerned with the individual perspective of the support.

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According to this perspective, in comparison to those with low levels of perceived support, those with high levels interpret the same behaviors as more supportive and have better memory of supportive behaviors (Lakey & Cohen, 2000; Baldwin, 1992). The relationship perspective predicts that the health effects of social support cannot be separated from the relationship processes that often occur with social support. These processes include companionship, intimacy and low social conflict and even dispositional characteristics and adult attachment styles (Lakey & Cohen, 2000; Rook, 1984). Due to the varying theoretical perspectives, a number of constructs are included under the umbrella of social support, many of which are at best marginally correlated with each other (Schwarzer, 1991). Therefore any study with an assessment of social support must include a statement regarding its theoretical underpinnings. Social support is studied in the Jena study under the stress and coping perspective which is the most influential perspective on social support. In this perspective social support acts as a stress buffer either through the supportive actions of others or through the belief that support is available (Lazarus & Folkman, 1984).

In the Jena study, investigation into the associations between social support and demographics reveal that, for instance, women report higher levels of social support compared to men. Higher education is related to more social resources, whereas being unemployed is associated with a deficit. There are regional and community differences with people from eastern Germany reporting higher levels of social support than respondents from western Germany. People who live in villages also tend to report more social support compared to people living in small towns or cities (Blumenthal & Reitzle, 2007). The possible relationship between social support and perceived social change-related uncertainties can be inferred from other studies on general stress (Ihle, Esser, Schmidt, Blanz, Reis, & Meyer-Probst, 2001; Shteyn, Schumm, Vodopianova, Hobfoll, & Lilly, 2003). First, there may be a direct effect of social support on the stress level for instance when help is provided in the case of difficulty. Second, social support serves as a resource in coping with change and in compensatory primary control in particular, because using support from others is one central element of this form of strategy (Silbereisen et al, 2006).

In summary, with the goal to understand Ghanaian students work and education related decisions, the Jena model of social change and human behavior was used to provide a framework for this study to enable the examination of individual level experiences of macro-level social change. However, other more proximal factors were expected to mediate in the relationship

between perceived work-related demands and postgraduate intentions namely, expectancies and values which are part of the achievement motivation tradition and discussed next.

2.7 Eccles et al. expectancy-value theory of achievement motivation

Researchers in psychology have long been fascinated by the issue of human motivation with much of the motivation literature focusing on beliefs and cognitions related to achievement. The achievement motivation theory relates and combines personal characteristics and external factors to a need for achievement (McClelland, Atkinson, Clark, & Lowel, 1953). Ability beliefs, values, goal choices, performance, and persistence in goal-related activities are some of the factors that are known to contribute to achievement (Eccles & Wigfield, 1995). The expectancy–value theory is a perspective on achievement motivation (Wigfield & Eccles, 2000). Atkinson (1964) proposed one of the first formal models of achievement motivation based on expectancies and values (Roberts, 2007). The expectancy-value perspective argues that an individuals' choice, persistence, and performance can be explained by their beliefs about how well they will do on the activity and the extent to which they value the activity (Atkinson, 1957; Eccles et al., 1983; Wigfield & Eccles, 2000). These expectancies for success and values have been shown to be important determinants of motivation to perform different achievement tasks (Wigfield, 1994). Therefore given several behavioral options, the choice will be based on the behavior with the largest combination of expected success and value. This implies that humans are goal-oriented beings and that the behaviors performed in response to beliefs and values are undertaken to achieve some end (Roberts, 2007).

More recent researchers in the expectancy value tradition (e.g., Eccles et al., 1983; Feather, 1982; 1992) have expanded the earlier definitions of Atkinson (1964), and further discussed how expectancies and subjective task values mediate motivation and achievement in educational settings (Wigfield, 1994). Eccles and her associates (1983) in their theoretical model expand and explain the links among cultural factors, one's experiences, values, and achievement behavior. The model presents a multidimensional representation of constructs on five hierarchical levels. On the first outcome level are achievement-related choices, the model posits that these choices are determined by constructs in the second level which are expectations of success and perceived value of the task. Expectancies and values are assumed to influence directly not only achievement choices but also performance, effort, and persistence. On the third level are features that are related to goals and general self schemata and affective memories, including self concept

of one's abilities and the perceptions of the task needs. The constructs at the third level are influenced by cognitive components like the socializer's beliefs, expectations and attitudes, gender roles activity stereotypes and the child's interpretations of their experience on the fourth level. The fourth level is further influenced by the fifth level which includes components external to the individual like the context in which the individual lives (the cultural milieu), the beliefs, attitudes and behaviors of important socializing figures and the individual's previous experiences of related events (Ward, 1995; Wigfield & Eccles, 2000). The inclusion of both contextual and psychological constructs such as socialization experiences and cultural milieu is an important feature of this model and represents an ongoing emphasis on the contribution of contextual variables to psychological processes (Ward, 1995).

Figure 2.2 The Eccles at al. expectancy-value model of achievement motivation
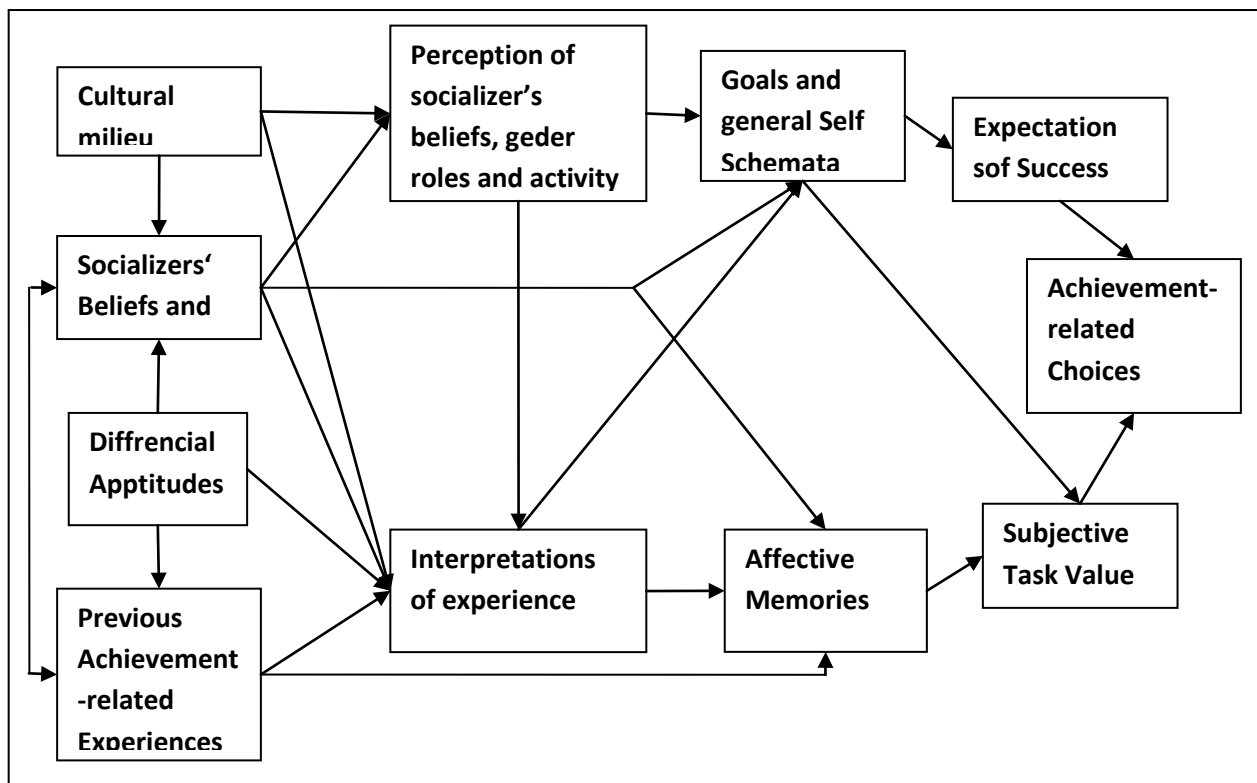
Adapted from Wigfield and Eccles, (2000) and Eccles, (2005)

Eccles (2005) further outlines some features of the model that are not explicitly captured in the figure. First, the achievement-related behaviors involve both conscious and unconscious choices. People make conscious and unconscious choices such as how to spend their time and these lead to life-long achievement-related patterns which are heavily influenced by socialization

pressures and cultural norms. Second is on what becomes part of an individual's field of possible choices. According to this perspective, individuals routinely choose among different options but most of the time, the full range of options are not considered because the individual is not aware of their existence. The example is given of young people making career decisions without full or accurate knowledge of exactly what the career options are about or require. With inaccurate or little knowledge, choices may turn out wrong for them in the long run.

The third aspect of this model is the explicit assumption that achievement-related choices are made within the context of the individuals own complex social reality. This reality presents a set of available choices to the individual with short and long term consequences for the choices. Often, since the choice is between two or more positive options or both positive and negative components, the key then becomes the relative personal value of each option. Hence, the within-person comparisons are more important than the mean-level between-persons comparisons. The fourth feature of this model is the assumption that processes summarized in the model are both developmental and dynamic as is the case with the Jena model. The model provides a global view of the sociocultural factors that influence the psychological processes but the authors stress that these processes are dynamic across time and developmental history. Finally, the model assumes that the relative salience of the different value subcomponents will vary developmentally and across situations. For instance, for young children, intrinsic enjoyment may be more salient and for young adults working towards a goal, utility value may be more salient (Eccles, 2005).

In the present study, we employ only the expectancies and subjective values constructs (see Eccles (1987); Wigfield & Eccles (1992) for comprehensive presentations of the model) which will be the focus of the next section.

2.7.1 Expectancies

Atkinson (1957) originally defined expectancies as the individuals' anticipations that their performance will be followed by either success or failure and in Eccles et al (1983) expectancy-value model, expectancy beliefs are defined as students' beliefs about how well they will perform on upcoming tasks or activities either in short or long term future. In the model, Eccles et al., (1983) distinguishes conceptually between ability beliefs and expectancies for success with ability beliefs referring to the individual's perception of his or her current competence at a given activity. Ability beliefs are thus focused on present ability and expectancies focused on the future

(Wigfield & Eccles, 2000) but contend that the two are empirically related (Eccles & Wigfield, 1995). For instance original examples of items measuring the two constructs are;

- How good in math are you? (Ability beliefs)
- How well do you expect to do in math this year? (Expectancy beliefs)

The constructs used in this model are similar to others used in the literature. For instance expectancies are compared to the concept of expectations (Bandura, 1997). Wigfield and Eccles, (2000) asserts that in his theory, Bandura (1997) distinguished between efficacy expectations, defined as the individual's belief that he or she can accomplish a task, and outcome expectancies, which is the belief that a given action will lead to a given outcome with the former being more predictive of performance and choice than the latter. They argue that the concept of expectancies within the expectancy-value model is conceptually similar to Bandura's efficacy expectations and is a stronger predictor of performance and choice than outcome expectations.

The early studies to test these constructs were carried out with junior and senior high school students to investigate gender differences in math course taking. First, they consistently found that across childhood and adolescence ability beliefs and expectancies for success consistently emerged as theoretically distinct concepts and domain specific even for children in the first grade (Eccles et al., 1993; Eccles & Wigfield, 1995). Longitudinal analyses (Wigfield, Eccles, Yoon, Harold, Arbreton, Freedman-Doan, 1997) also showed that children's ability-related beliefs for math, reading, instrumental music, and sports declined across the elementary school years. And these declines were shown to often continue into junior high or middle school and across the high school years (Eccles et al., 1989; Wigfield et al., 1991). Studies which looked at how expectancies predicted performance and choice found that even when previous performance is controlled, children's beliefs about their ability and expectancies for success were the strongest predictors of subsequent grades in math, predicting those outcomes more strongly than either previous grades or achievement values.

2.7.2 Subjective values

Values like expectancies are an integral part of the expectancy-value model and are seen as the quality of the task that increases or decreases the probability that an individual will choose it (Eccles, 2005). Eccles et al. (1983) defined four different components of achievement values: attainment value, intrinsic value, utility value, and cost (see Eccles et al., 1983, and Wigfield & Eccles, 1992, for more detailed discussion of these components).

Attainment Value

Attainment value refers to the personal perceived importance of the doing well on the task (Eccles et al., 1983). Attainment value is linked to the concept of identity. Tasks that are seen as central to the individual's concept of themselves are also viewed as more important and such tasks provide an opportunity for the individual to express or confirm parts of their identity (Eccles et al. 1983). Attainment value is also linked to the idea that motivation to engage in a task is influenced by the extent to which the task fulfills basic needs for autonomy, social relatedness and sense of competence (Deci & Ryan, 1985). Eccles (2005) adds to these needs, the need to feel that one matters and is respected and valued by ones social group. According to the expectancy-value theory, previous experience with a task also influences attainment value of the task because, an individual with a history of success in a task will come to identify himself with the task and feel good in engaging in activities related to the task and is therefore likely to have a higher value in such tasks (Eccles, 2005). Therefore, attainment value assumes that generally, individuals seek to confirm possession of certain characteristics that are important for their self image and given a choice among different tasks, an individual is likely to place more value and thus choose the task that provides an opportunity to fulfill these characteristics. For example, a graduate whose self image is that of a well educated young person may make the decision to go to graduate school to confirm and maintain that self image.

Intrinsic Value

Intrinsic value refers to the inherent enjoyment that the individual derives from the activity or the anticipated enjoyment one expects to experience from a task. This construct is related to the concept of "flow" (Csikszentmihalyi, 1988) which is characterized by a feeling of being immersed in an activity, a merging of action and awareness, a narrowly focused attention, a lack of self consciousness and feelings of control over ones actions and environment. For "flow" to occur, the individual must feel that they are able to master the challenge of the task (Eccles, 2005). Intrinsic value is also similar to the construct of intrinsic motivation (Deci & Ryan, 1985; Deci, Vallerand, Pelletier, & Ryan, 1991), and the construct of situational interest (Hidi, 1990). However, Eccles (2005) notes that intrinsic interests are not the same as intrinsic motivation although the former is an example of the latter. According to her, intrinsic motivation has more to do with origin of the decision to engage in the activity and intrinsic interests have to do with the source of the activities value. According to Eccles (2005), individual difference in interests may

be related to core aspects of the self like temperaments, personality and also both genetic and learned tendencies through the positive or negative experiences during the initial encounters with the tasks.

Utility Value

Utility value refers to the perceived usefulness of the task for the individual's current and future goals and agenda. Utility value might not be related to the nature of the task at hand but on the task being a means to an end (Eccles, 2005) and in this way related to "extrinsic motivation" as described by Deci and Ryan, (1985). Utility value is also related to the concept of "introjected value" in that it describes personal goals that were originally set by external environment, for instance, by significant others, and are partly accepted by the individual. Utility value is also very conceptually close to attainment value to the extent that when an individual's goals becomes an integral part of their identity and needs then such an activity has both utility and attainment value.

Cost value

Cost values are conceptualized as the negative aspects of engaging in a task such as, the individual's perceptions of effort exerted on a task, how the decision to engage in one activity limits access to other activities, and the potential consequence of failure (Eccles et al., 1983; 2002). For instance, enrolling for a postgraduate program could be perceived as taking time from other pursuits such as starting a family, working to earn money and socializing with old friends. The developmental period under consideration is when other transitions and tasks are taking place or being considered alongside getting an education such as romantic relationships and starting a family, career considerations and asserting independence from parents. Focusing on any one of these tasks may mean less time and effort on the others. Costs perceptions are influenced by factors such as anticipated anxiety, fear of failure and the consequences of success or anger from key people in one's life and fear of loss of self worth (Eccles, 2005). Thus costs refer to what the individual has to give up in accomplishing a task as well as the anticipated effort to get the task to completion. According to Eccles (2005), gender and sociocultural socialization has a large influence on the perceived costs of activities as they determine which activity should be given more priority.

It is also assumed that individuals have a sense of how much effort they think is worthwhile for various activities based on the conception that people tend to calculate the

minimal amount of effort needed to succeed on a task (Kukla, 1972). It is predicted (Eccles et al., 1983) that when individuals perceive the amount of effort for success exceeds the amount of effort considered worthwhile, they tend to lower the values of the task. In other words, as the cost/benefit ratio increases due to the increase in the perceived amount of effort, the value of the task decreases. Another cost factor is the perceived loss of time for other activities that an individual values. Each learning task comes with a potential for the learner to fail. The potential determines the way the learner's motivation affects their behavior. Therefore cost value assessments are vital to assess how graduates weigh their decisions as costs to other possible choices.

2.7.3 Empirical evidence

Findings from the initial researches on the model among students (Eccles & Wigfield, 1995) generally found that the attainment, interest, and utility value aspects could be distinguished empirically confirming the theoretical distinctions in the model. Wigfield et al. (1992) however found that during the early elementary school years children's subjective values are less differentiated, with two factors (interest and utility-importance) emerging in the confirmatory factor analysis of children's responses to items in the math, reading, and sports domains. With regard to whether expectancies and values are empirically distinguishable, the researchers found that even in young children in first grade, ability related beliefs and subjective task values are clearly distinguishable and that expectancy beliefs and subjective values formed clearly distinct factors (Eccles et al. 1993). Therefore, even during the very early elementary grades, children appear to have distinct beliefs about what they are good at and what they value in different achievement domains.

Fewer studies however, examine how these constructs influence post-high school achievements and performance. Battle and Wigfield, (2003), examined how all four task-value components were related to postgraduate intentions during the transition out of university. They assessed only women and whether the components of task value (attainment, intrinsic, utility and cost) could be empirically identified with respect to their valuing of graduate education. Also, how different aspects of task values predicted college women's intentions to attend graduate school. The different components of task value were found to be empirically distinct with the exception of intrinsic and attainment values which factored together. This finding was explained to be because the separation of intrinsic value from attainment value may be more difficult when

the task in question is still far off in the future, compared to matters of more immediate concern in participants' lives. Further results showed that all task value variables were significant predictors of intentions to attend graduate school with ''intrinsic-attainment'' value being the strongest predictor of intentions, followed by utility and cost.

Using a longitudinal design, Roberts, (2007) examined the relations between possible selves at the end of high school, expectancies and values two years later, and achievements ten years post-high school in five domains: work, conventional family, instrumentality, altruism, and deviance. They used data from Michigan Study of Adolescent and Adult Life Transitions (MSALT) project. They found that expectancies and/or values that were related to participants' possible selves were often more influential in predicting future outcomes than were the possible selves alone. In the work domain, results indicated that those participants whose possible selves at the end of high school reflected lower status occupations also had expectancies, two years post-high school, about having more occupational difficulties in the future. These relations suggest that lower expectations might discourage achievement motivation in a more general sense. That is, one's hopes and fears about the future influences expectancies about what one might be able to achieve.

In the instrumental domain, expectancies about the likelihood of getting a bachelor's degree were more indicative of meeting participants' educational and financial expectations ten years post-high school than were hoped-for or feared possible selves. Also, expectancies about the likelihood of going to graduate school were more indicative of participants' level of education ten years post-high school than were feared possible selves, for men. This suggests that expectancies about getting a bachelor's degree facilitated meeting one's expectations about educational and financial goals later in life. Their results confirmed that expectancies and values influence how motivated emerging adults are in achieving distal life goals. And that the expectancy-value model of achievement motivation (Eccles et al., 1983) is applicable, not only for adolescents and young adults in academic settings but also for emerging adults within a variety of life domains and with respect to achievements over an extended period of time.

Sampling from a select group of African American college students (N=202) attending both Historically Black Colleges and Universities (HBCUs) and a Predominately White Institution (PWI), Caldwell and Obasi, (2010) investigated the intersection of cultural mistrust, educational value, and achievement motivation in predicting academic performance. Among their results, they pointed out that the motivation to achieve, a more intrinsic construct, was positively

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related to academic performance. Educational attitudes moderated the relationship between motivation to achieve and academic performance suggesting that even when students are motivated to succeed and have high academic self-efficacy, if they do not value education, performance will be negatively influenced. Conversely, a high value of education buffered some effects of low motivation to achieve. The authors explained that many African American students may not believe that performing well in school will lead to personal or socioeconomic gain in the future. These beliefs can stunt goal striving and the pursuit of many occupations.

Other researchers have highlighted the utility of the expectancy-value model in predicting performance in specific achievement domains. Parkes and Jones (2012) found that attainment value, intrinsic interest value, and expectancy predicted (74%) of the variance in whether students intended to choose a career teaching music. Expectancy, attainment value, ability perceptions, and intrinsic interest value explained (65%) of the variance in whether students intended to choose a career in music performance. Zan and Ping (2008) also sustained the application of the expectancy-value model in the context of a college weight training class. They found that importance and interest (subjective values) were significant predictors of intention and engagement, whereas expectancy-related beliefs emerged as the only predictor of performance. Moss and Frieze (1993), also found that the expectancy-value model significantly predicted job preferences in a longitudinal study of MBA students (N= 86) over and above the proportion of variance explained by self-to-prototype matching.

In sum, the expectancy-value model of achievement motivation provides an opportunity to investigate the motivational factors that influence a graduate's choice to continue their education. Essentially, the present research, with a longitudinal research design, brings together the Eccles et al. expectancy-value model and the perceived work-related demands to investigate further education intentions before and after graduation from the university. However, intentions alone have been shown to be a poor predictor of behavior (Sheppard, Hartwick & Warshaw, 1988) and more so with regards to the difference between postgraduate intentions and actual enrollments (Wakeling & Kyriacou, 2010). To tackle this issue, we drew from the theory of implementation intentions (Gollwitzer, 1993; Gollwitzer & Oettingen, 1998) and assessed the student's plans already in place for furthering their education.

2.8 Implementation intentions theory

A goal of psychology as a discipline is to understand and predict behavior and most theories that are designed to do this perceive the formation of an intention and ability appraisals as the proximal determinants of goal achievement (Gollwitzer & Sheeran, 2006; Webb & Sheeran, 2008). Goal intentions can be defined as the instructions that people give themselves to perform particular behaviors or to achieve certain desired outcomes (Triandis, 1980) and show a commitment to pursuing a goal or performing a behavior (Gollwitzer, 1990; Webb & Sheeran, 2005) and these intentions can vary in strength. However studies show that not all intentions eventually lead to a behavior. For instance, many individuals intend to exercise but fail to link this intention to behavior and also many graduates intend to get a postgraduate degree but relatively few actually do (Budden & Sagarin, 2007). Implementation intentions are used in the present study to bridge the gap between intentions and behavior by assessing those respondents who are more likely to perform the behavior. Implementation intentions theory has its roots in the theories of Planned Behavior and Reasoned Action.

The theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) is one of the most influential theories of the attitude-behavior relationship. This theory proposes that an intention to perform a behavior is related to the attitude towards performing the behavior and the subjective norm concerning its performance. Attitude is defined as the "favorable or unfavorable evaluations of a behavior". Subjective norm is the "perceived social pressure to perform or not perform a behavior". The implication being that intention is a better predictor of behavior than mere attitude (Gillholm & Garling, 1997). In a bid to improve the predictive power of the theory of reasoned action, the theory of planned behavior was introduced which combined perceived behavior control with attitude and subjective norm as predictors of behavior (Gillholm & Garling, 1997). The theory of planned behavior (Ajzen, 1988) thus proposes that intentions are a function of three independent determinants; attitude, subjective norm, and perceived behavioral control. Perceived behavioral control is "an evaluation of whether one has access to the necessary resources and/or opportunities to perform a behavior" (Budden & Sagarin, 2007, p 392). Intentions according to this theory indicates how hard people are willing to try to perform a behavior and how much effort they plan to exert and is a summary of the cognitive and affective mechanisms through which attitude, subjective norm, and perceived behavioral control direct future behavior (Orbeil, Hodgldns & Sheeran, 1997). Behavior is therefore seen as a function of intentions and perceived behavioral control.

According to Gollwitzer (1990) and Heckhausen (1991), the processes outlined in the theory of planned behavior constitute the deliberative phase of the movement towards behavioral goal. In this phase, the costs and benefits of pursuing the goal are considered and this phase culminates in the establishment of the goal intention or decision. These authors further propose a post-decisional or implemental phase which encompasses all efforts to promote the initiation of the relevant actions through the formation of plans specifying where and when to act. These plans in the post-decisional phase were called implementation intention by Gollwitzer (1993) and a number of studies have subsequently shown that implementation intentions do improve the likelihood of goal achievement (Brandstaetter, Heimbeck, & Malzacher, 2003) in a host of behaviors including attendance for cervical cancer screenings (Sheeran & Orbell, 2000), improving the likelihood of performing breast self-examinations (Orbell, Hodgkins, & Sheeran, 1997), improving the likelihood of vitamin-C use (Sheeran, Orbell, & Norman, 1999), and improving an individual's ability to eat a healthy diet (Verplanken & Faes, 1999; Armitage, 2004).

In trying to explain how and why implementation intentions work, a number of explanations have been proposed. Some (Ajzen, Czasch, & Flood, 2009) argue that implementation intentions are effective because they create a sense of commitment to the intended behavior. These researchers reported that forming an implementation intention specifying when and where to watch a television news program increased news watching over and above participants who were simply asked to watch the news. They however also reported that explicit commitment instructions (for instance, 'I hereby make a commitment to complete this study by carrying out the intentions I have made to watch the newscasts') were as effective in promoting goal-directed behavior as implementation intentions. Hence the conclusion here is that the formation of implementation intentions creates a sense of commitment to the behavior (Webb & Sheeran, 2008).

Another proposed reason for the effectiveness of implementation intentions is that they activate situational cues and this heightened accessibility ensures that the anticipated opportunity is quickly detected and acted upon. Webb and Sheeran (2004) provided evidence of this and in an experimental setting, Aarts, Dijksterhuis, and Midden (1999) found that heightened cue accessibility can explain the beneficial effects of implementation intention formation on goal attainment (Webb & Sheeran, 2008). Another possible mechanism for the success of implementation intentions is that forming an implementation intention not only requires that one

identify a suitable future opportunity to act, but also that one identifies an instrumental response to that opportunity. The consequence of making a future response contingent upon encountering a particular situational cue is that a mental link is forged between the anticipated opportunity and the intended response. By forging such a mental link, the response is enacted more immediately, (Brandstatter et al., 2001; Gollwitzer & Brandstatter, 1997; Webb & Sheeran, 2004), more efficiently (Brandstatter et al., 2001), and with greater redundancy of conscious intent (Sheeran et al., 2005).

In a study more similar to the present research, Brandstätter et al., (2003) used implementation intentions in the area of continuing education in a sample of East German participants. The participants rated the expected value of further education, indicated whether they had taken a decision to continue their education (goal intention) and whether they were planning goal-directed actions (implementation intention). A follow-up two years later revealed that participants were more successful in initiating vocational retraining when they had a goal intention that was additionally furnished with an implementation intention. Hence for the present research, we assessed the plans already in place for postgraduate study. The idea being that assessing the plans already in place for postgraduate study will effectively differentiate those participants with postponed or long term plans for postgraduate study from those with more immediate plans (who are the focus of the study). Also implementation plans will help differentiate between respondent's responses which reflect what they perceive to be the researchers (a doctoral student) expectations and real intentions for postgraduate study.

2.9 Literature review

Literature review for the present study, will look at studies which investigate central assumptions of the previously described models and how they may be related, but may not necessarily draw from the models. First, a review of studies on the effects of social change-related uncertainties and motivational variables on different trasitional outcomes. In the last decade or so, much research has been directed at world-wide social change and how youth life and transitions have been affected. The GLOBALIFE project (Blossfield et al, 2005) is one such study. The large study spanning (14) mostly European societies investigated the implications of the globalization processes for adolescents and young adults. They studied labor market entry, early career patterns as well as implications on other developmental tasks such as marriage and family (Buchholz, Hofäcker, Mills, Blossfeld, Kurz, & Hofmeister, 2008). Their results indeed confirmed that

young people face increasing uncertainties when entering the labor market (Blossfeld et al., 2005; Francesconi & Golsch, 2005). These uncertainties are manifested particularly in the form of major increases in precarious, atypical forms of employment such as, short-term jobs, part-time jobs, precarious forms of self-employment, and, compared with older cohorts, lower income. Accordingly, young people are considered the 'losers' of the globalization process (Bucholz, 2005 p. 57). Although the youth tend to be more educated than older generations, they are affected particularly strongly, because they frequently lack job experience and strong ties (connections) to business networks.

As a reaction to growing uncertainties in the life course, the investigators identified four behavioral and adaptive strategies of youth in these countries (Mills & Blossfeld, 2005). First, they increasingly postponed decisions requiring a long-term commitment; the phase thus becomes more and more of a 'moratorium' and transitions to gainful employment often take a chaotic course. Second, they switch increasingly to alternative roles instead of employment (e.g. they spend longer in the education system instead of letting themselves be defined as 'unemployed'). Third, they are increasingly forming more flexible forms of partnership (e.g. consensual unions) that permit an adaptation to rising uncertainty without having to make long-term commitments (Nazio & Blossfeld, 2003; Nazio, 2008). Fourth, particularly in the family-oriented welfare states of Central and Southern Europe, they turn to the security of the family and the traditional gender roles of mother, housewife and husband breadwinner as a strategy to deal with the uncertainty. Even though the GLOBALIFE study was conducted in western, mostly European countries, the results has implications for youth in other parts of the world and in Ghana due to the global nature of the changes described and the similarities in youth experiences around the world (Saraswathi & Larson, 2002).

Other researchers have corroborated the finding of increased uncertainties experienced by today's youth. Seiffge-Krenke et al, (2012) in a study spanning (18) countries, investigated adolescent's perception of future and school related stress and how they cope with it. They assigned the participating countries into three regions based on socioeconomic criteria and geographic location (i.e., Western Europe and North America, Eastern Europe and Asia, and southern countries). The continental group comprised Germany, England, Finland, and the US. The East/Asian group included Croatia, the Czech Republic, Estonia, Poland, Russia, Hong Kong, and Korea. The South group included Costa Rica, France, Italy, Pakistan, Peru, Spain, and Turkey.

In all countries and all regions, adolescents reported that they experienced substantially higher levels of future-related stress than school-related stress. Female participants experienced higher stress levels than males, and stress increased with age. Adolescents in the continental group had the lowest levels of perceived stress and the highest levels of coping activities. Adolescents from the East/Asian region experienced notably more stress but reported the lowest levels of coping behaviors. Despite slightly more pronounced coping efforts, adolescents from the South group reported the highest stress levels of all. This study highlighted the importance of the developmental context and situational factors for adolescents stress perceptions and the sociocultural differences in coping styles and provided insight into adolescent lives in non-western societies.

Other studies on work uncertainties have addressed questions of the novelty of the uncertainty experience and the differences and similarities with older cohorts. Gutman, Schoon and Sabates, (2012) addressed this question by comparing adolescents born in two distinct socio-historical periods (1970 & 1989/90) with data from the Longitudinal Study of Young People in England. They also investigated whether uncertainty influenced the adolescent's later educational outcomes. Findings indicate first that the characteristics of young people who reported uncertain aspirations were similar across the two cohorts. Uncertainty was associated with growing up in a relatively disadvantaged family, with parents who have low educational expectations for their children, and having low academic attainment, low school motivation and lack of belief in one's own ability. They also found gender differences; young males not only held greater uncertainty about continuing in education, the consequences of uncertainty regarding later academic performance were worse for males than females. Occupational uncertainty was associated with worse educational consequences in the older cohort, but with higher achievement and a greater likelihood of continuing in education in the younger cohort. The authors suggest that young people today, especially those from more disadvantaged backgrounds, may benefit from an extended moratorium period where they can explore career options while still being engaged in educational pursuits. However it is not certain if such advantages of an extended moratorium extend to young people from economically disadvantaged countries like Ghana. With the exception of select middle-class youth who may have the opportunity of exploring career options, most youth may experience pressure into jobs and to earn a living. Also, it is not clear whether youths at the tertiary level, as in the present sample, can still benefit from an extended moratorium period. It is thought that at this level, there would be a heightened urgency and

increased pressure to settle into career paths (Poulin & Heckhausen, 2007) which may not be amenable to an extended exploration period and moratorium. Moreover, it is not certain whether and which individual characteristics play a role in who may or may not benefit from uncertainty and an extended moratorium.

At the individual level, in the present study, the role of motivation in the manifestation of uncertainty in the transition to work is investigated. Research points to the importance of positive career and further education appraisals to foster goal attainment and mitigate the influence of work and education uncertainties. For instance, Dietrich, Jokisaari and Nurmi, (2012) examined the importance, attainability, and progress of personal goals during the transition from education to work. They also examined the interplay of the appraisals with stress in the domains of economic situation, time, and work on a sample of Finnish young adults (N=265, 60% female). They found among others that individuals who appraised their work goals as important, attainable and progressing, had less stress in all three domains. Perceived economic and time stress decreased during the transition to employment, but work stress unexpectedly increased. The changes in stress over the study period were explained with the reasoning that a majority of participants at the end of the study were employed in jobs which they considered satisfactory. Therefore, their financial situation may have improved and their time use more structured. However, their new performance and work responsibilities may be responsible for the increase in work stress.

The results also showed that those individuals who initially experienced elevated stress levels due to their economic and work situation adapted their work-related goals, and later set goals which were more attainable and showed better progress. When people's initial goals were highly important, concurrent work stress was low and when work goals gained importance and progressed well over time, the increase in work stress was less pronounced. They explained with the reasoning that placing a high emphasis (importance) on one's work goals, and setting goals which are likely to be attained, helps individuals to invest more energy in goal striving. This helps them to focus on the demands of their new work environment (Nurmi, 2004; Salmela-Aro, 2009). On the whole, the study underscored the sensitivity of work goals to change especially during the school-work transition compared to other goals, a finding that has been corroborated by other studies, (Nurmi & Salmela-Aro, 2002; Nurmi, 2004; Salmela-Aro, 2009) and which would be investigated in the present study. They also provided evidence for the reciprocal nature of the relationship between work stress, appraisals and goals.

Määttä, Nurmi and Majava, (2002) similarly assessed Finnish young adults (*N*=250) over their transition out of school, and identified five kinds of achievement strategies used by the respondents namely; the optimistic and defensive pessimism (the two strategies were labeled adaptive strategies), learned helplessness and self handicapping (the two labeled maladaptive strategies) and the fifth, the normative strategy. They investigated the role of the strategies in the transition from school to work and found that the achievement strategy had an impact on the likelihood of problems in the transition. Adaptive strategies (e.g. internal attributions) increased and maladaptive strategies (e.g. passive avoidance and external control beliefs) decreased success after graduation (success was defined as finding work). Internal attributions while still at school were associated with continued education. The authors speculated that continued education for these respondents may be the result of (a) failure to find a job, (b) high autonomy reflected in their high internal control or (c) those students were in a moratorium stage of career identity and were spending the time in further education to explore.

The authors further reported that the outcomes of the individual's efforts to deal with the transition had consequences for their subsequent strategies and attributions. Young adults who were able to find a job after school were less likely to report external causal attributions later on and those who were unable to find a job after school were less likely to attribute success to internal causes a year and half after graduation. This study lends support to the notion that the kind of attribution strategy used has consequences for how successful individuals are in the transition from school to work. Also, the kind of previous outcomes they experienced and their experiences during the transition period has consequences for the strategies they use later and their overall success. The study underscored the need for a longitudinal design, not only for before and after assessments, but also assessments during the transition.

Since the present study was in a non-western context, of interest was how transitions to work differed with different contexts. Using a cross-cultural approach, Nurmi, Poole and Seginer (1995) compared adolescents in three countries; Australia (*N*=120), Israel (*N*=46), and Finland (*N*=102) on the extent to which the cross-cultural differences in age-related normative transitions and institutional tracks are reflected in their future-oriented goals, temporal extension, and the levels of exploration and commitment. According to the authors, these three countries were chosen because they differ systematically in some of the major normative transitions and institutional tracks. Their results showed that in all the three countries, the adolescents most frequently mentioned concerns related to the domains of future education, occupation, health, and

family or marriage with no cultural differences in these concerns. Israeli youths in particular, but also Finnish adolescents, expected their hopes concerning education to be realized later in their life than did Australians. Finnish youths expected their hopes concerning occupation to be realized later in their life than did Australians. These differences in temporal expectations were considered a reflection of the fact that Israeli youth and Finnish boys had to go through military service as a special type of institutional transition. Thus the military service of several years among Israelis seemed to postpone the age they expected their educational goals and concerns to be actualized. This study, one of a few that takes national youth programs into account during the transition to work, provides some evidence for the influence of national youth service programs on youth transitions, their education and work goals.

Other studies have looked at sociodemographic predictors of outcomes of the transition to work. Tynkkynen, Tolvanen and Salmela-Aro, (2012) used the Eccles et al. expectancy-value theory in a 5-wave longitudinal study to examine the trajectories of educational expectations from adolescence to young adulthood (*N*=853; 48% female; M = 16 years). The authors identified 5 trajectories of educational expectations: stable-university (38%), stable-vocational (18%), stable-polytechnic (24%), increasing-expectations (10%), and decreasing-expectations (10%). They found that the higher the adolescent's SES, perception of parents' educational aspirations, and grade point average (GPA), the more likely the participant was to be in the stable-university trajectory compared to the stable-vocational trajectory. Participants with higher ability-beliefs were more likely to be in trajectories with high and stable educational expectations compared to the unstable trajectories. The trajectories were related to the participants' educational situation after comprehensive school.

The influence of social support and coping mechanisms in the graduates motivation for postgraduate education was also addressed in the current study. Social change-related uncertainties are viewed as a source of stress in the present study. Any research on stress inevitably assesses resources and coping methods due to their well documented protective role in dealing with perceived stress (Crockett, Iturbide, Torres Stone, McGinley, Raffaelli, & Carlo, 2007). There are many studies that look at the relationships between perceived stress, social support and coping strategies and will not be handled in the present study (Hobfoll & Vaux, 1993; Thoits, 1982). What is of present interest is how these protective factors relate to expectancies and values. First, there is considerable research support for the link between supportive social relationships and adaptive motivational beliefs including, but not limited to,

goal orientations, academic values, academic efficacy and interest (e.g., Felner, Aber, Primavera,& Cauce, 1985; Wentzel, 1998). In general, the studies support the assumption that the simple perception that a social network is supportive can have the potential to boost one's self confidence and to help internalize valued goals (Covington & Dray, 2002; Eccles, 1993). There is also some evidence for the link between perceived social support and academic achievement (Rosenfeld, Richman & Bowen, 2000) with evidence showing a likely mediation through the individual's motivational mechanisms. For instance, Ahmed, Minnaert, van der Werf & Kuyper, (2010) studied of the mediational roles of motivational beliefs and emotions in the association between perceived social support and mathematics achievement of Dutch early adolescents (N = 238). Their results reveal that perceived social support influenced achievement through its effect on competence, interest, enjoyment and anxiety.

Associations between coping strategies and the motivation come from social cognitive theories that link cognition and motivation (Borkowski & Muthukrishna 1995; Pintrich et al., 2000). These models postulate that cognitive and motivational constructs influence each other as well as being influenced by the social context. In turn, both the cognitive and motivational constructs are assumed to influence students' involvement with their learning and, consequently, achievement outcomes (Eccles & Wigfield, 2002). Pintrich & De Groot (1990) found that students' achievement values determined initial engagement decisions and that their self-efficacy facilitated both engagement and performance in conjunction with cognitive and self-regulation strategies. If individuals determine that the consequence of an activity is important enough for them, they are more likely to undertake the action. If not, then engagement is less likely. Again, when individuals are intrinsically motivated, they engage in an activity because they are interested in and enjoy the activity. When extrinsically motivated, individuals engage in activities for instrumental or other reasons, such as receiving a reward.

In summary, current heightened uncertainties associated with the transition out of school seems to have long-term psychological and behavioral implications. Youth across the globe, in some respects, share similar experiences during the transition out of school. There are also notable differences, for instance, with regards to the perception and impact of uncertainties. Several factors account for these variations including, the social, historical and cultural context and filters, the timing of the uncertainty, the available resources, and the individual characteristics of the individuals. This underscores the importance of understanding the multiple interlinked factors that shape career development (Gutman et al., 2012). Gaps within the

literature first have to do with the dearth of comparable research knowledge about the transitions of youth in sub-Saharan Africa. It is less clear whether, and to what extent, these research findings apply to youth in this region. Other gaps have to do with the lack of studies that specifically address young people's subjective perceptions of social change-induced work-related uncertainties. Previous studies tended to assess uncertainties or work and future stress more generally. Moreover, so far, researchers have mostly theorized about social change-related trends driving young people to stay longer in education. But, there has been relatively little empirical investigation to support this link. The present study seeks to fill these gaps.

3 The present study

3.1 Linkages between the expectancy-value model of achievement motivation and the model of social change and human development

The present study merges two models; the Eccles et al. expectancy-value model and the model of social change and human development and examines the relations among variables in both models in one study. The expectancy-value model facilitates the understanding of why individuals engage in specific activities and how they judge their performance and in this case, their motivations behind postgraduate education intentions. A significant feature of the Eccles et al. expectancy-value model is the inclusion of both psychological constructs and contextual factors as important antecedents of expectancies and values. Among these are cultural influences which act through the individual's socializer's' beliefs and behaviors. In the current study, we argue that for a population of students transitioning out of the university, other sociostructural influences come into play, for instance, societal and labor market trends and conditions. These trends and conditions have been shown to have important implications for the transition to work life (Silbereisen, 2005). The two models are therefore combined with the reasoning that the social change-related perceived work uncertainties captured under the work demands construct will influence the individual's work and further education related expectancies and values.

The theoretical and empirical support for this linkage are studies that show that the current socio-economic and labor market landscape influences graduates career/further education decisions (e.g. Blossfeld et al, 2005). These studies have largely been exploratory with assertions that the current contextual conditions are influencing pro-further education trends among today's youth. In turn, career/further education decisions are achievement related and are therefore influenced by inherent appraisals of these domains (Eccles, et al 1993). Put together, it seems probable that the macro-level uncertainties associated with the labor markets may be influencing career-and education decisions through the individual appraisals of these domains (Dietrich et al, 2012). The present study contributes to the literature by first, assessing the subjective perceptions of the labor market-induced uncertainties; work demands and examining its influence on further education intentions and the mechanism of this influence through the individual's education and work domain specific appraisals.

In addition, the Jena model identifies the individual's coping strategies and resources as interacting with perceived demands to influence various outcomes. Therefore in the present

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study, coping strategies, conceptualized as engagement and disengagement coping, and perceived social support, conceptualized as a coping resource in the Jena model are assessed. The goal is to investigate how coping strategies and perceived social support interact with work demands to influence expectancies and values in leading to postgraduate intentions outcomes. Finally, how the relationships between these variables change over the course of the transition out of the university is examined. The proposed relationships between the variables are presented below.

3.2 Aims, research questions and hypotheses

The present study investigated among Ghanaian tertiary graduates, the associations between perceived work-related stress, coping strategies, perceived social support, success expectancies, subjective values and further education intentions, taking cognizance of the mandatory national service program for all tertiary graduates. Given that the constructs, taken from the Jena Model of social change and human development and from the Eccles et al. expectancy-value theory had not been previously used in the Ghanaian context, the first aim was to investigate their generalizability and any empirical similarities and differences with previous use in the literature. Following this, the study also aimed to investigate a number of research questions and hypotheses. The first research question addressed a cross-sectional concern; how the constructs were related to each other at baseline. The second research question addressed a longitudinal concern; change in the different constructs and in predicting the outcome variable, postgraduate implementation intentions over the study period.

3.2.1 Cross sectional research question; how are the constructs related to each other at baseline?
Direct and indirect effects of perceived work demands on postgraduate intentions (Hypothesis 1)
Hypothesis 1 was concerned with the mediating roles of expectancies, subjective values and costs in both domains on the relationship between perceived work demands and postgraduate intentions pre-graduation. In terms of specific paths, first, it was expected that the perceived work-related demands would be positively associated with the intention to pursue postgraduate education (Hypothesis 1a). This is based on current research indicating that globalization-led macro-level changes have influenced youth developmental trajectories and transitions. One consequence is that more young people are spending longer periods in education pursuing higher degrees (Blossfield et al, 2005; Mills & Blossfeld, 2005). In the current context as well, we argue that the socio-economic changes, evident in the form of new employment forms and rising

graduate unemployment are experienced at the individual level as, for instance, fears of becoming unemployed or perceiving that one's education is not enough and the subsequent need to "improve" on ones work chances among others. All these perceptions are associated with the tendency to stay longer in education (Hendry & Kloep, 2002; Heckhausen & Chang, 2009; Langevang, 2008; Tomlinson, 2008; Gutman, Schoon and Sabates, 2012). Therefore it is hypothesized that perceived work-related demands would be positively related to postgraduate intentions (Hypothesis 1a).

Figure 3.1 Conceptual model showing cross-sectional associations (only ones that are investigated presently) between perceived work demands, coping strategies, social support, motivational variables and postgraduate intentions
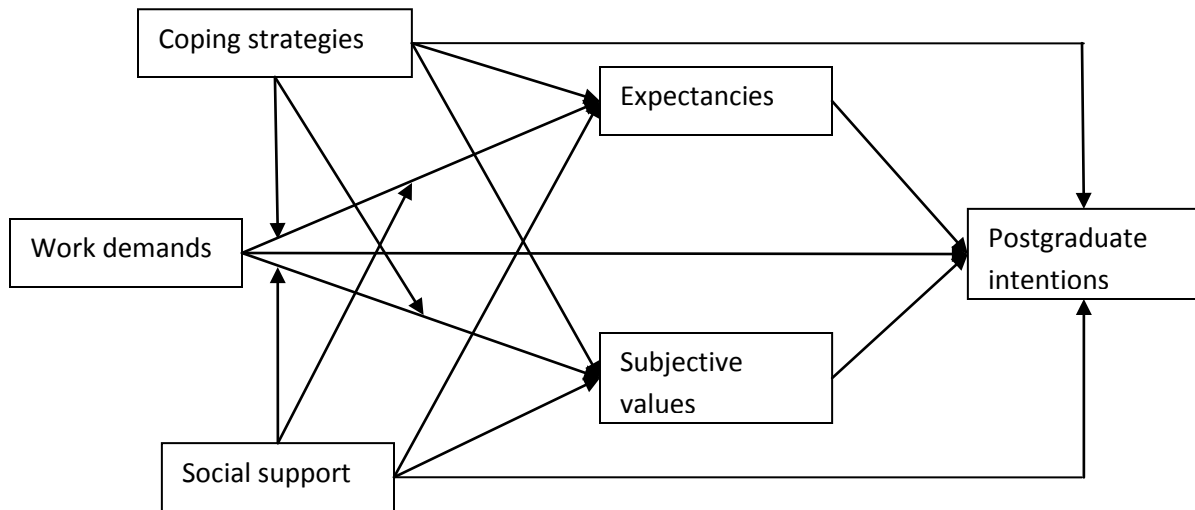
With regards to how demands are related to expectations and values, we base our hypotheses on the reasoning that a diminished sense that the world is controllable is likely to affect goal control striving (Poulin, & Heckhausen, 2007). During periods of transitions, peoples appraisals of goals such as, the importance (values), commitment and their beliefs about attainability of these goals (expectancy) are heightened (Dietrich, Jokisaari & Nurmi, 2012). These goal appraisals can impact perception of stress and reciprocally, perceived stress can also have an impact on goal appraisals. Problems in dealing with the challenges of a transition have also been shown to lead to less positive goal appraisals (Nurmi, Salmela-Aro, & Koivisto, 2002). Other studies show that self-efficacy beliefs about mastery and competence are strongly related to

perceived stress and determine people's opinions about difficulty of a task (Çayirdağ, 2012; Solberg & Villarreal, 1997). Taken together and applied to the current context, it is reasoned that when individuals feel burdened by work uncertainties they are likely to feel less positive about their chances at work and more positive about furthering their education, which is a more familiar pursuit for them. It is therefore expected that perceived work-demands would be positively related to expectancies in further education (Hypotheses 1b), and negatively related to expectancies in the work domain (Hypotheses 1c) (Boateng & Ofori-Sarpong, 2002). High labor market uncertainties among the students may also exaggerate the importance of a postgraduate degree (Grix, 2001). Accordingly, a positive relationship is expected between perceived work demands and values in the education domain (Hypothesis 1d). Alternatively, we expected a negative relationship between perceived work demands and subjective values in the work domain (Hypothesis 1e). Cost values refer to negative aspects of a task and, along a similar line of reasoning, those who feel burdened by work uncertainties are more likely to perceive more expense associated with working after graduation, and less with furthering their education. Hence, a negative relationship was expected between perceived work-related demands and costs in the education domain and a positive relationship with costs in the work domain (Hypothesis 1f, 1g).

In the motivation literature, a lot has been done with regards to predicting achievement outcomes such as, postgraduate intentions, enrollments and performance with motivation variables such as, self efficacy, expectancies, and values or variants of these constructs (Lane, Lane, Lane & Cockerton, 2003; Wilson, Marlino & Kickul, 2004). Accordingly, associations are expected between expectancies and values on one hand and postgraduate intentions on the other. However, divergent relationships were expected between expectancies and values in the two domains and postgraduate intentions for the following reasons. It is argued that individuals who have high success expectations about their further education chances are more likely to want to further their education (and make plans thereof) than those who have high success expectations about work. Hence, it is expected that education domain expectancies would be positively related to postgraduate intentions (Hypothesis 1h) and work domain expectations negatively related to postgraduate intentions (Hypothesis 1i) (Boateng & Bekoe, 2001). It was further expected that respondents who have high education domain values would be more likely to have high postgraduate intentions (Hypotheses 1j) (Battle and Wigfield 2003; Office of Science & Technology, 2000; Phillips, 2000; Purcell, Elias, Davies, & Wilton, 2005; Wakeling, 2009).

Alternatively those who have high values for work should be less likely to have intentions for further education (Hypotheses 1k). With regards to cost values, we expected a negative relationship of education domain costs with postgraduate intentions (Hypothesis 1l) and positive relationship in the work domain costs (Hypothesis 2m) (Battle & Wigfield, 2003).

The moderating effect of coping strategies (hypotheses 2, 3)

The present study also investigated the coping strategies (engagement and disengagement) used to mitigate the effect of labor market related uncertainties and how these interact with expectancies and values. Research has shown that high perception of demands tends to be associated with adverse consequences (Pinquart & Silbereisen, 2004). One factor that may differentiate those who do and do not experience negative psychological outcomes is the type of coping strategies the individual typically uses when encountering extreme conditions. For example, it is plausible that under conditions of labor market uncertainties, graduates who generally cope actively with the uncertainties exhibit more positive work and further education appraisals. Research has linked general use avoidance coping strategies to negative consequences (Stein et al., 2005). Jostmann and Koole (2009) theorize that when experiencing difficulties, what distinguishes an individual who lets go from one who persists, are the values the goal holds and the expectancy that they will be successful eventually. Studies also show that individuals exert their best efforts and spend a substantial amount of their time to engage in tasks they perceive to be important, find useful for their future and want to succeed in, and are less likely to pursue a task they perceive to be less relevant for attaining their future goals (Greene, Miller, Crowson, Duke & Akey, 2004). Also, individuals with high perceived competence are inclined to adopt mastery and performance-approach goals, whereas individuals with low perceived competence tend to adopt a performance-avoidance goal (Elliot, 1999; Skaalvik, 1997).

Based on these previous associations, it is expected that the engagement coping strategies will positively relate with expectancies and subjective values and negatively with costs values in both domains. On the other hand those who are high in disengagement are less likely to have high success expectations and values, therefore disengagement will also relate negatively with expectancies and values in both domains and positively with costs values (Hypothesis 3a -3f). Furthermore, based on results from the Jena model, a buffering effect of engagement and disengagement coping is expected; the effect of work demands on postgraduate intentions

through expectancies-values is expected to be weaker when the level of engagement coping is high (hypothesis 2) and stronger when the level of disengagement coping is high (hypothesis 3).

The moderating effect of perceived social support (Hypothesis 4)

There has been wide research support for the buffering effect of perceived social support on the relationship between stress and psychological outcomes (Silbereisen et al., 2006). Research has also shown an association between perceived social support and goal self-confidence, values and achievement outcomes (Ahmed et al, 2010; Sarason, Sarason & Pierce, 1990). Based on these foundations, a buffering effect of perceived social support on the indirect relationship between work demands and postgraduate intentions through expectancies and values was investigated in the present study. It was expected that the effect of perceived work demands on postgraduate intentions through expectancies and values will be weaker when perceived social support is high (Hypotheses 4). Furthermore, a positive relationship was expected between perceived social support and expectancies and subjective values in both domains (Hypotheses 4b - 4e). With regards to costs values, it is expected that perceived social support will be negatively associated with costs values in both domains (hypotheses 4f, 4g). This is because costs perceptions are expense evaluations of achievement related activities and may have to do with limited resources to pursue the activity leading to reservations about the merit of the activity. Therefore, having the support of significant others may influence a lowered cost perception of both activities.

3.2.2 Longitudinal research question and hypotheses

Longitudinally, it was expected that individuals would change after leaving the university based on the argument that development is malleable (e.g., Baltes, 1987; Lerner, 1996). This is especially true during such major transitions because individual development is less constrained (Haase, 2007). Given the shared experience of leaving the university and embarking on the national service, the individuals may exhibit shared pathways across the study period. Therefore, *mean-level change*s in all the study variables were explored. With respect to perceived work demands, an increase was expected (Hypotheses 5a) (Hendry & Kloep, 2002; Bouteyre, Maurel, & Bernaud, 2007; Vollrath, 2000). This is because, being a student tends to cushion one from perceiving the effects of labor market uncertainty therefore, leaving this protection to the national service (the first working experience for many) may intensify the perception of these

uncertainties. The uncertainties measured by the work demands become more real as the respondents face realities such as unemployment, underemployment and the inadequacies of their educational training.

Work-related goals are especially sensitive to change during the transition to work (Nurmi, 2004; Salmela-Aro, 2009). Hence, postgraduate intentions are expected to change and although the change may go in either direction, an overall mean-level increase in postgraduate education intentions is expected (Jepsen & Neumann, 2010). Several reasons may drive this change. First, heightened unemployment concerns, after leaving the university, may cause a push towards further education to increase ones competitiveness. Second, the graduates may feel the need to again seek the protective cushioning of the student role as a protection from labor market uncertainties which have become heightened due to the national service experience (Dietrich et al, 2012; Wendlandt & Rochlen, 2008). Finally, it has been suggested that graduates who are still undecided about career-paths, turn to further education using the period for further career exploration (Heckhausen & Chang, 2009; United Nations, 2003). This scenario may apply in this context as well. Hence, an increase in the average levels of postgraduate implementations plans is expected across the study period (Hypotheses 5b).

Work and further education-related expectancies and values could also change during goal pursuit. First, the general importance of work and further education can decline, as other life domains, such as starting a family, become more prominent (Roberts, O'Donnell, & Robins, 2004). Second, during transitions, people have been known to set new goals to match new realities and experiences and then have to adjust their expectancies and values to match the new goals (Haase, 2007; Wigfield & Eccles, 1992). In the same manner, with the national service come new realities and experiences. For instance, the national service typically involves experiences such as, menial administrative and teaching tasks, dealing with superiors with less education, questioning the practical utility of one's education and efforts to adjust and fit into the working environment. These experiences may likely influence one further education and work appraisals. There are suggestions that frustrations about unexpected difficulties make people regard the frustrated goal as more valuable (Klinger, 1975). In the present instance, we argue that frustrations with the national service may drive the importance and expectancies associated with further education and decrease that of work. It is therefore hypothesized that, at the mean level, education-related expectancies and values would increase whilst levels in the work domain would

decrease (Hypotheses 5c-f). With costs, education domain costs would decrease with the converse expected for the work domain (Hypotheses 5g, h).

With regards to engagement and disengagement, few studies have addressed change in these coping strategies (Haase, 2007; Rothermund & Brandtstädter, 2003). Haase (2007) found mean-level change in disengagement over the transition to work in a sample of German graduates, although no changes were observed for engagement. The reasoning given for the decrease in disengagement was that individuals may disengage early on in the transition, as a reaction to anticipatory or imaginary failure experiences, which they subsequently overcome late in the transition, hence the decrease. In the current context, it is argued that at the start of the transition (when the current second wave is conducted), the new experiences afforded by the national service would cause an increase in engagement and decrease in disengagement strategies. For instance, individuals who experience increased work demands and subsequently feel they need to further their education may also engage more/disengage less to achieve their goals. Therefore, a mean-level increase in engagement coping and decrease in disengagement coping is expected (Hypotheses 5i, j).

The limited research evidence on change in perceived social support shows that the construct lends itself to change, especially during periods of transitions (Shulman, Kalnitzki, & Shahar, 2009). For instance, Schulenberg, O'Malley, Bachman & Johnston, (2005) found that during emerging adulthood, mean levels of social support tended to increase. Increased support from parents and siblings has been shown to relate to better adjustment over the period (Holahan, Valentiner & Moos, 1994; Shulman et al., 2009). In the present context and population, it is common to move back in with parents or family (this includes extended family) after graduation. Moreover, ones network of friends, family, church members, social clubs, etc. are widely used in Ghana in employment quests. Hence, there is likely to be a heightened awareness of one's social network during the transition with the increased likelihood to reach for the help afforded by this network. Therefore, a mean-level increase in perceived social support is expected across the study period. It is worthy of note here that the present study is a two-wave study and therefore restricted in the extent of change that can be investigated. All change hypotheses are made with this limitation in mind.

Following from the expectation that postgraduate intentions will change over the study period, the next goal of the analyses was to predict this change in postgraduate intentions. It is for

instance considered that heightening (increase) of perceived work demands across the transition period will influence the corresponding increase in postgraduate education plans (Hypothesis 6a) (Dietrich et al, 2012). It is argued that when the perception of work uncertainties becomes more salient during the transition, the importance of further education increases and since it is a more familiar domain, their expected success in it increases while the perception of associated costs with it decreases. Correspondingly, the expected success, and subjective importance in work decreases while the costs associated with work increases. Therefore, it is expected that increased perceived work demands could lead to increase in education domain expectancies and values and work domain costs as well as a decrease in work domain expectancies and values and education domain costs, all of which could fuel an increase in postgraduate intentions (Hypotheses 6b – 6m). In sum, mean-level changes will be examined in all constructs. Moreover, whether or not change in work demands and other factors predict change in postgraduate intentions will be investigated.

4 Methodology

The present study was designed to answer questions concerning the influence of social change-related perceived work demands, expectancies and subjective values on further education implementation intentions and how these constructs change over the transition out of university. This study is an offshoot of the larger research project, the Jena Study on Social Change and Human Development (Silbereisen et al., 2006), a longitudinal project carried out from 2005 in Germany. The Ghana study represents an endeavor at generalizing aspects of the Jena model to a different sociocultural context and therefore borrows extensively from the established scales used in the Jena study. All scales with the exception for the expectancy-value scale that was used in the Ghana study were originally from the Jena study questionnaire. In the following sections, the procedure and sample for both pilot studies and main studies will the described. Next, the measures used in the questionnaire will be described and finally, there is a description of the analytical procedure used to manage the data and infer the results.

4.1 Pilot studies

The expectancy-value scales along with the work demands, coping and social support scales were administered to two convenience samples $N=$ 54 and 51 respectively in two different public universities in Ghana between July and August 2011. These two pilot samples were comparable to the sample used in the main study in terms of age, number of years in the university and gender distribution but differed in the subject being studied. The aim of the pilot studies was to test the different scales in the Ghanaian context and correct any errors or problems with the items before the main studies. The changes to the measures resulting from the pilot studies are described in the measures section below. An additional testing was conducted with 5 national service personnel who provided information about their understanding of the items on the final version of the questionnaire in November 2011 just before the main study took place.

4.2 Main study

The main study used multi-methods of data collection; the same questionnaire was used, but the method of administering was different for the two waves of data collection. The first wave used paper-pencil format in a lecture room setting and the second wave was a web-based study (Brannen, 2005). The rationale for this duo-method was a pragmatic one. The second wave was

planned for during the respondent's national service. During this period, respondents are spread all over the country and the internet was considered the feasible way of reaching them. In recent years, the worldwide reach of the internet has meant that web-based research is becoming increasingly attractive in academia.

Web-based data collection is seen as offering a few advantages over traditional paper and pencil tests. For instance web-based studies allow for lower costs in data collection and more precision with data entry (e.g., Birnbaum, 2004; Tourangeau, 2004). It may also be more convenient to the respondents because they are able to respond to the questionnaire at their own ease. It may allow more room for anonymity than traditional paper and pencil tests and therefore encourage more candid responses. On the other hand, traditional paper-based studies have the advantage of the familiarity of their settings and it is relatively quicker to run than web-based studies. Additionally, with web-based studies, response is dependent on accessibility of internet connection which is problematic in rural areas where some of the present respondents may have been posted to.

The following sections look at the different issues that arise from the adoption of these two methods of questionnaire administration; first, both methods have ethical and sampling concerns that are discussed. Second, concerns that have to do with measurement equivalence of these methods are discussed. This is especially relevant in the present case where the data from these methods will be compared and/or aggregated.

4.2.1 Ethical and sampling considerations

Although there is no formal worldwide ethical policy for computer and web-based research, it is generally recommended that researchers adhere to procedures to ensure the adequate protection of their research participants and guarantee the validity of the data collected. Computer- and web-based research protocols must essentially address the same risks and provide the same level of protection as any other types of research involving human participants. Therefore all studies, including those using computer and internet technologies, must (a) fulfill the principles of voluntary participation and informed consent, (b) maintain the confidentiality of information obtained from or about human participants, and (c) adequately address possible risks to participants including psychosocial stress and related risks (Frankel & Siang, 1999).

With regards to voluntary participation and informed consent, respondents in the present study were provided full information on the study during both waves. They were informed about

the option to opt out of the study and were required to sign informed consent forms before participating in the study. It was assumed that by giving their email addresses after the first wave, participants had agreed to take part in the second wave. Adequate debriefing was also carried out (Nosek, Banaji, & Greenwald, 2002; Haase, 2007). On the issue of confidentiality of information, as promised to the participants, the data was used only for the purpose for which it was collected. Reputable online survey software was used and all data was removed from the website after the study ended. To protect the identity of respondents, they put together an anonymous code which was used to tie responses of the two waves instead of actual names. In terms of risks to participants, concerns have to do with protection of minors, and respondents of the present study did not include minors (the ages ranged from 19 to 54 at first wave). The participants were also provided in both waves with an email address to contact in case of questions.

Pertaining to sampling issues, first, the sample is a select sample of final year students from two academic departments in a university in Ghana. The study doesn't attempt to generalize to other population groups although the results may be relevant for similar populations in Ghana and other countries in the sub region. Additionally, with web-based studies and the second wave, the sample gets even more selective and response is limited to internet users only. However, the present sample is made up of university graduates who are considered computer and internet literate, by virtue of their education, compared to the rest of the population. Those respondents who are posted to remote rural areas may have a harder time accessing the internet hence responses may still be biased by the location of the respondents. However, since they are most likely working in educational, public and private organizations that generally and regularly use internet services, such respondents can still have access to internet. Generally self selection biases, a problem with other data collection methods as well, cannot be completely ruled out (Birnbaum, 2004).

There is also the risk of respondents deliberately providing false data or filling out the questionnaires multiple times (Birnbaum, 2004; Nosek et al., 2002). Again, this problem exists with every study. In this study, having participants volunteer their email addresses ensured that only serious respondents agreed to the second wave. Moreover, the web survey software prevents multiple filling of questionnaire. To minimize dropout rates which are a major concern with web-based and longitudinal studies, a number of steps were taken. First, respondents received "thank

you" mails upon completion of the questionnaire in both waves. A pre-notification mail was sent three days before the actual start of the second wave data collection. Pre-notification mails have been found in web-based research to increase response rates (Lusinchi, 2007). Respondents were also sent several reminders over the course of the data collection period. Design wise, efforts were made to keep navigation of the site simple and the questionnaire as short as possible. Finally, there was the promise of a raffle draw after the second wave with the opportunity to win gift certificates. Cook, Heath, and Thompson (2000), in a meta-analysis of factors influencing response rates in web-based surveys found that follow-ups of non-respondents and pre-notification were among the dominant factors in higher response rates, all of which were used in the present study.

Data comparability

The main consideration here is whether responses elicited using paper-and-pencil and web-based measures can be meaningfully compared (or aggregated).   According to Cole, Bedeian, and Field (2006), questions that come up include (a) whether items asked on both formats are conceptually equivalent, (b) whether paper-and-pencil and Web-based operationalizations of underlying theoretical constructs yield equivalent associations, and (c) whether responses collected using paper-and-pencil and web-based measures are subject to the same forms of nonsystematic measurement error.

Measurement equivalence of web-based and paper-and-pencil surveys is important especially when comparing or aggregating the data because without balance in the factor structure and pattern of factor loading, the interpretations from inferences are questionable. From the literature, however, there are two sides to the debate about the equivalence of these data collection methods. On the one side, there is evidence (e.g., Buchanan, 2002; Buchanan, Johnson, and Goldberg 2005) with the conclusion that mounting an existing measure on the internet is not enough to assume it is the same instrument. One the other side of the literature divide, other evidence suggests that mode of administration may not adversely affect the comparability of responses. studies have demonstrated basic convergences between paper-and-pencil and online measures (Fouladi, McCarthy, & Moller, 2002; Potosky & Bobko, 1997) and that the measures' factor structures, item loadings, correlations between factors, and latent factor variances were equivalent across administration modes (Stanton, 1998). In the present study, efforts were made

to ensure that on the surface, the wording, instructions and arrangement used on both methods were same or as similar as possible and in addition, the measurement equivalence of the present scales was investigated statistically prior to the second wave hypotheses testing.

4.2.2 Sample

First wave. The first wave of data collection had a total of 504 final year students who were enrolled in a large public university in Accra, Ghana. The data collection took place in November, 2011. Out of the total number of participants, 149 (29%) were Business Administration majors with the rest being Psychology majors. These two subject majors are chosen because they have the largest student population in the university. The demographic characteristics of the sample are summarized in Table 3.1. The respondents ranged in age from 19 to 54 with a mean age of 24 years and 45.5% were male.

Second wave. Out of the total number of first wave respondents (504), 377 (75%) provided their email addresses for participation in the second wave of the study out of which 295 were valid. In the second wave, 295 participants were invited and 133 responded. The demographic characteristics of the sample are summarized in (Table 4.1). In the second wave, 22.7% of the respondents were business administration majors and the rest psychology majors. There were 54.1% male respondents in the second wave.

4.2.3 Procedure

First wave. Permission was sought from the respective course lecturers who agreed for a section of their lecture time to be used for the data collection. They also informed their students a week in advance about the data collection exercise. During the exercise, after being introduced by the lecturers in charge, the researcher distributed the questionnaire booklet and separate consent and information sheets to the students. The students were verbally informed about the study and reminded of their freedom of choice in participation. They were assured of data confidentiality, signed the informed consent sheets before completing the paper and pencil questionnaires. Data collection took place during regular lecture time with the lecturers present in a session of approximately 30 min duration.

Second wave. The second wave utilized the internet survey software, QuestBack Survey. The same scales and items used in the first wave questionnaire were entered online and the respondents were invited by email to respond to the questions by clicking on a link within the email. A pre-notification email was first sent to respondents to inform them of the second wave three days before the invitation mail. The invitation email was sent in October 2012 and 13 reminders were sent with three day intervals between each reminder. Additionally, using their email addresses, reminders were sent to respondents Skype accounts. The web-based data collection took place from October to November, 2012. The data were exported from the survey software into an SPSS worksheet for subsequent analyses.

Table 4.1 Sociodemographic Characteristics of the Sample by Field of Study

	First wave		Second wave	
Field of study	***M***	***SD***	***M***	***SD***
Psychology	*n* = 358, 71.0%		*n* = 102, 77.3%	
% males	44.4		50	
Age	24.39	4.43	25.43	4.31
CGPA	3.64	.61	3.61	.64
Business administration	*n* = 146, 29.0%		*n* = 30, 22.7%	
% males	52.4		67.7	
Age (*M*)	23.24	2.92	23.8	2.19
CGPA	3.86	.47	3.91	.29

4.2.4 Comparison of sample with population characteristics available

First, the gender distribution of the present sample was compared to the university's distribution. The percentage of males in this study was (46.5% & 54.5%) in first and second waves respectively. Statistical reports from the same university indicate that (55%) of the undergraduate population is male (University of Ghana annual reports, 2010). Therefore, there seems to be an overrepresentation of females in the first wave sample. This overrepresentation

could be because the psychology department, where a larger section for the sample was recruited from (71%), is one of the few departments in the university with a larger female population (56% male).

Regarding age, since the age distribution statistics of the university population was not available, we compared to another study that sampled students from the university. Amponsah and Owolabi (2011) sampled Ghanaian university students and found the majority (80%) of final year students to be between (22/23). In the current sample, about (50%) are aged between (22/23) and the sample mean is slightly older at 24 years but the median and mode age is 23 and 22 respectively. The difference in mean age between the reported study and the current sample may be explained by the few much older participant outliers in the current sample (> 40 years).

The influence of socio-economic background (SES) on access, participation and success in higher education is well documented especially in developing nations. In the Ghanaian context, a survey conducted in 2002 on the socio-economic status of students in higher education (Ghana National Council on Tertiary Education, 2006) showed that enrollment is skewed in favor of students with white-collar backgrounds over those with blue-collar backgrounds. Students from the highest income group (status 4 and 5 in a range from 1 to 5) are more than seven times more likely to enter and successfully complete higher education than those from the poorest group. In the present study SES was a combined score of parent's occupation and education and ranged from (1) - low to (4) – high. Current sample results indicate a mean of (2.57) and a mode of score 3 showing that a majority of respondents belonged to a higher socio-economic status.

Cumulative grade point average (CGPA) is calculated on student performance over the 4-year undergraduate study period. Each course is awarded a grade between 1 and 4. At the end of each academic year and the undergraduate study period, the average is cumulatively computed and the final score determines the students pass grade. The scores and their corresponding grades are as follows; First Class (3.60-4.0); Second Class Upper Division (3.25-3.59); Second Class Lower Division (2.50-3.24); Third Class (2.00-2.49); Pass (1.50-1.99); Fail (below - 1.50). In the current sample, the mean grade point was (3.7). This corresponds to first class grade. However, the universities statistics indicates that only 11.5% of overall students graduating in 2010 obtained this grade. 2nd Class Lower (CGPA = 2.50-3.24) was the most frequent obtained grade (49.29% of all graduates). Among the Bachelor of Arts (psychology degree) and BSc.

Administration, the numbers that obtained a first class were (10.2% & 16.6%) respectively. It seems then that the current sample overestimated their CGPA or perhaps they did not know.

In sum, on the most part, the sample demographics were not very different from the population (final year university student) demographics. With the exception of CGPA where the current sample seemed to largely overestimate their academic performance.

4.2.5 Comparison of respondents with non-respondents

There were 3 levels of response/non-response in the study

1. Those who took part in only the first wave and did not provide their emails for second wave participation.
2. Those who provided their email addresses during the first wave but did not respond to the invitation to participate in the second wave.
3. Those who participated in both waves

These 3 groups were compared in key demographic variables, age, gender, socio-economic status, field of study. Also on key study variables; intentions, work demands expectancies and values.

With regards to the demographic variables, respondents who participated in both waves appeared quite similar to the non-respondents. Regarding age, the second wave mean (24.14) was not very different from the mean ages of non-respondents (24.01) and to overall first wave mean (24). Regarding gender, there were more males among second wave respondents (53.4%) compared to non-respondents (44%) and also the overall sample (45.5%), where females were the majority.

Regarding the university department, slightly more (77.1%) of second wave respondents were psychology majors, compared to the first wave (72.6) and to non-respondents (69.4). The mean Cumulative Grade Point Average (CGPA) among second wave respondents (4.15) did not differ largely from the overall mean (4.16) and from non-respondents (4.16).

For further analysis of these differences, logistic regressions were conducted with the demographics as predictors and response/non-response to second wave being the outcome

variable. None of the demographic indicators, Age, SES, university department, CGPA were significant with the exception of gender ($p = .05$). The result indicated that males were more likely to respond to the second wave than females. Looking at these descriptives, it appears that there is not much statistical difference between second wave respondents and non-respondents.

Table 4.2 Response groups compared on demographics

	Wave	Mean	SD	Significance
Gender (male)	Wave 1 only (1)	$n = 91, 44.4\%$		$p=.05$
	Invited but did not participate in wave 2 (2)	$n = 72, 43.6\%$		
	Wave 2 only (3)	$n = 70, 53.4\%$		
University Department (psychology department)	(1)	$n = 136, 65.4\%$		n.s.
	(2)	$n = 121, 73.3\%$		
	(3)	$n = 101, 77.1\%$		
Age	(1)	24,07	4,43	n.s.
	(2)	23.96	3.75	
	(3)	24.16	3.94	
CGPA (range from 1 to 4)	(1)	3.73	.58	n.s.
	(2)	3.72	.56	
	(3)	3.70	.58	
SES (range from 1 to 4)	(1)	2.56	.70	n.s.
	(2)	2.53	.66	
	(3)	2.62	.63	

Table 4.3 Response groups compared on key study variables

		Mean	SD	Significance
Intentions (range from 1 to 3)	(1)	2.08	.48	n.s.
	(2)	2.05	.50	
	(3)	2.19	.42	
Work Demands (range from 1 to 7)	(1)	3.73	1.51	n.s.
	(2)	3.84	1.38	
	(3)	4.03	1.42	
Expectancies education domain (range from 1 to 7)	(1)	5.96	.83	n.s.
	(2)	6.08	.75	
	(3)	5.99	.76	
Values education (range from 1 to 7)	(1)	6.17	.90	n.s.
	(2)	6.28	.75	
	(3)	6.28	.79	
Costs education (range from 1 to 7)	(1)	2.97	1.43	n.s.
	(2)	2.00	1.42	
	(3)	3.02	1.28	
Expectancies work domain (range from 1 to 7)	(1)	5.75	1.00	n.s.
	(2)	5.77	1.01	
	(3)	5.67	1.04	
Values work (range from 1 to 7)	(1)	5.67	1.14	n.s.
	(2)	5.74	1.21	
	(3)	5.55	1.36	
Costs work (range from 1 to 7)	(1)	3.27	1.38	n.s.
	(2)	3.18	1.42	
	(3)	3.11	1.32	

The groups of respondents/non-respondents were also compared on key study variables; implementation intentions, work demands, expectancies and values in both domains and in addition, logistic regression analysis was conducted predicting the outcome of response/non-

response with all the key study predictor variables (Table 4.3). The results indicated that the mean implementation intention (range from 1 to 3) for second wave respondents was (2.19) and (2.12) for non-respondents, indicating no significant difference between the groups. Again, no significant difference existed among the respondent groups on work demands as well as all the other variables. This yielded no significant results for any of the variables. This indicates that the second wave respondents did not differ significantly from non-respondents on any of the variables of interest.

4.3 Measures

This section describes of the measures in the questionnaire including scales on perceived work-related demands, expectancies and values, postgraduate education implementation intentions and demographic questions. All were self-report measures. The complete questionnaire can be found in Appendix A.

Perceived work demands scale

The perceived work demand scale consists of eight social change work-related items for students. The demands construct and items were derived from social change tendencies arrived at after a critical look at the current affairs in Germany and in other Western societies, extensive literature search and a series of expert interviews. These societal tendencies were translated to the individual level, after corroboration from statistical and empirical sources. They were finally compiled into new demands in the domains of work/occupation, intimate relationships/family, and leisure/public life. The work demands items reflect the changes in the structure as well as the changing needs of the labor market and refers to the individual's sense of uncertainty about their occupational careers (Silbereisen & Tomasik, 2011). For instance the risk of increasing unemployment, of being laid off and the increasing need for flexible workers.

Three versions of the work demands were developed: for employees, for the unemployed, and for individuals who are still in school, university, or receiving vocational training. For the present research, the version for participants still in school was used. The three versions have similar wording, however, the items for the student's version refer to education (e.g. "... I have a higher risk of not concluding my training") and items for the workers version refer to the workplace (e.g. "... I have a higher risk of being laid off."). To allow for a constant reference

period, all the items are introduced with "When considering the past five years …" in the first wave and with "When considering the past year …" for the second wave. Participants are asked to rate the degree to which they endorse these statements on a seven-point Likert rating scale ranging from; (1) "does not apply at all" to (7) "fully applies". For detailed description of how the items were formulated, see Tomasik & Silbereisen (2009).

Following results from the pilot study, a few changes were made to the perceived demands scale for the present study. First, the wording of two of items was amended to fit better with the present sample. For instance the item; "When considering the past five years, there are fewer occupational training opportunities for me" was changed to "When considering the past five years, there are fewer future job opportunities for me". The reason is that the students in this context are unlikely to look for training opportunities after their undergraduate studies. The item; "When considering the past five years, the risk of not finishing education has increased" seems very unlikely for this group. This is because they are in their final undergraduate year and at this point only private reasons such as failing their final exams would cause them not to be able to finish their education. The item was therefore changed to; "When considering the past five years, the risk of not finding a job after finishing national service has increased".
Two additional items were also added to the six original items. The additional items had similar sentence format as the original and addressed issues peculiar to the Ghanaian student's transitions to work that were not already reflected in the original perceived demand items. These were

- "When considering the past five years, the bachelors degree has become less valuable than it used to be" and

- "When considering the past five years, my education doesn't adequately prepare me for work any longer".

For analysis, a composite score was formed by averaging across the eight items. Internal consistency (Cronbach's α) for the scale is .88 for the German study (Pinquart, Silbereisen & Körner, 2009). For the present study, the consistencies are (.82/ .88) for the first and second waves respectively. In terms of validity, in previous use, perceived demands has consistently shown positive correlation with convergent measures, such as depressive symptoms ($r = .17**$) and negative correlations with divergent measures, such as satisfaction with life ($r = -.19**$) (Silbereisen & Tomasik, 2011). In the present study, in line with previous research, perceived

work demands showed positive correlations with all control strategies (.08 < r < .18) and a negative albeit small correlation with perceived social support (-.03).

Expectancy-value scale

The expectancy and value scales were adapted from existing scales into the current version. Expectancies and values as defined by Eccles and colleagues are domain specific, therefore required items specifically targeted at postgraduate education and work after national service. In the modification of the scales, three steps were followed. First, the items were modified from the original items to address the specific domains of the present study. These items were put into two different question and response formats for testing. The process involved discussions with the Jena social change research group to highlight and correct any inconsistencies, ambiguous wording and redundancies. The second step involved piloting the different items formats and finally deciding on which format to use for the main study based on the results of both pilot studies. This involved analyses of descriptive results, factor analyses and internal consistencies. Items that exhibited low reliabilities and loaded on different factors were removed from the scale. The third step in the process involved applying the changes indicated by the pilot results to the questionnaire. For instance, although Eccles original scale included items that compared across domains and individuals, such items were found to show weak reliability and indistinct factor loadings and were subsequently removed (e.g. "Compared to further education, how well do you think you will do in the working field?" was removed after the pilots). Results from the pilot studies also revealed that the three subjective-value types; intrinsic, attainment and utility values were empirically indistinguishable and loaded on to a single factor. They were subsequently composited in further analyses although still measured separately. To enable easier comparison across domains, similar items were prepared for both domains under study.

The expectancy scale items were modified from Eccles et al's (1983) original items assessing expectancy beliefs of math. The expectancy scale as used in the main studies comprises four items per domain. Examples of items are; "How confident do you feel to handle the challenges of graduate school after your national service?" for the further education domain and "How confident do you feel to handle the challenges of working life after your national service?" for the work domain. Responses are rated on a seven point Likert-scale with the response anchors reflecting the operational words in the item. For instance the response anchors

for the items above are (1) ="not confident" and (7) ="very confident" The scores on the items on the expectancy scale were averaged for a composite expectancy score. Cronbach's α for this scale is (.76/.71; first & second wave) for the education domain and (.82/.89; first & second wave) for the work domain. In terms of validity, previous use of the expectancy scale has shown positive associations with subjective values as conceptualized (Ward, 1995; Wigfield et al. 1997). Roberts (2007) found that expectancies about the likelihood of going to graduate school predicted participants' level of education ten years post-high school. In the present study, expectancies were significantly correlated with same domain subjective values. In the education domain; (.42[**]/.433[**]; first & second wave) and work domain (.46[**]/.467[**]; first & second wave). Expectancies were also negatively correlated with cost values in the education domain (-.135[**]/ -.338[**]; first & second wave), and the work domain (-.123[**]/ -.365[**]; first & second wave).

The subjective value scales were modified from the Value of Education Scale (VOE) used by Battle & Wigfield, (2003) to investigate college women's valuing of graduate education. The value scale consists of thirteen pairs of items assessing four subjective value types with each of attainment, intrinsic, utility values having three items each and cost value having four items. There are also similar items in the education and work domains. For instance, for the education and work domain respectively; "How important do you think a post graduate degree is for you to be able to fulfill your fullest potential" and "How important do you think working is for you to be able to fulfill your fullest potential?" (Appendix A). The response options ranged on a scale (1 -7) from "not important at all" to "very important". Cronbach's α for the composited subjective-value scale is .89 and .92 for the further education and work domains respectively and .63 and .65 for cost values, education and work domain respectively. In terms of validity, previous use showed significant correlations between ''intrinsic-attainment'' and "utility" value subtypes (.63**). Additionally, all task value types were significant predictors of intentions to attend graduate school (Battle & Wigfield, 2003). In the present study also, same domain expectancies, values and costs were significantly related. That is, participants who had high postgraduate expectancies were also likely to have high values and perceive low costs with postgraduate education, with similar relations with the work domain.

Postgraduate education implementation intentions scale.

This scale is adapted from a scale by Brandstätter, Heimbeck, Malzacher and Frese, (2003) in a study of intentions of continuing education among East German participants. The scale was included in the questionnaire because the pilot study results showed that a majority of the respondents had intentions to further their education with a post-graduate degree (87% & 88% had the aim of pursuing postgraduate education in first and second pilots respectively). The present scale assesses the level of planning already in place to continue with postgraduate education after graduation and national service with questions that address when, how, which, what and where. The reasoning is that those who already have these plans in place would be more likely to further their education after the national service and would differentiate between those with real intentions from those with postponed intentions or exhibiting a social desirability. The scale consists of six items including; "Have you clearly decided which institution you want to attend for graduate school?"

Like in Brandstätter et al., (2003) the responses are rated on a scale from (1) "not at all" to (3) "committed to an exact institution" and a score on the scale is obtained by averaging scores on the six items. The response scale was kept at three unlike the other scales in the study which had a response scale of seven to keep it as close as possible to the original scale by Brandstätter and because for these particular items, a wider response scale would exaggerate the variability in the answers. The implementation intentions scale has a Cronbach's alpha of .76. In previous studies (Brandstätter et al., 2003), the implementation intentions scale had a coefficient alpha of (.48). The scale was also positively related to convergent measures like goal intention (.22*) and action initiation (.34*). Also as validation, participants with an implementation intention were more successful in initiating vocational retraining than those with plain intentions alone. In the present study, postgraduate intentions showed significant positive relations to further education-related expectancies (.280[**]) and subjective values (.343[**]) in the first wave (second wave correlations were not significant but the directions were in concordance) in line with the conceptualization of the construct.

Control strategies

The control strategies scale follows immediately after the work demands items in the questionnaire and assesses how respondents deal with the perceived work-related demands. The

scale used in this study was developed and used in the Jena study. Each control strategy has three items each, a total of (15), with all items being rated on a seven point Likert-scale ranging from "does not apply at all" (1) to "fully applies" (7). The scale was drawn from the life-span theory of control (Heckhausen & Schulz, 1995) and distinguishes four types of control strategies.

- Selective Primary Control (SPC) refers to an individual's use of internal resources to overcome obstacles (e.g. "I am also willing to put in a lot of effort to find a good solution.").

- Selective Secondary Control (SSC) refers to an individual's cognitive strategies aimed at maintaining and improving motivational commitment (e.g., "I always tell myself that I can definitely make it if I only set my mind on it.").

- Compensatory Primary Control (CPC) refers to an individual's mobilization of external resources and support (e.g., "If I get stuck then I weigh up who I could ask for help.").

  o These three scales together form the engagement category,

- Compensatory Secondary Control (CSC) represents disengagement. Two different aspects of CSC were further considered. The CSC-P refers to self protection in case of failure (i.e., "If I don't manage at all to find a good solution, then I search for plausible reasons why it's not my fault.").

- The second, CSC-D, refers to clear disengagement from unattainable goals and perceived fruitless endeavors (e.g., "If I can't handle these changes at all, then I just don't concern myself with them any longer.").

In previous research (Tomasik et al., 2010), the five scales have shown a pattern of correlations that have been consistent with theory. The three goal engagement scales (SPC, SSC, and CPC) were positively correlated with each other ($.58 < r < .73$) and so were the two disengagement scales ($r = .54$). The goal engagement scales also correlated negatively albeit moderately with the goal disengagement scales ($-.36 < r < -.14$). In the present study as well, these relations were mostly upheld with the goal engagement scales ($.60 < r < .70$) and the disengagement scales (.63) positively correlating within these dimensions. The reliability coefficients of the individual strategies ranged between ☐☐($.61 < \alpha < .78$) in both waves.

Social support

This scale is made up of 8 items ($\alpha = .66$) adapted from the Berlin Social Support Scale (BSSS) by Schulz & Schwarzer (2003). This instrument captures 2 facets of social support, the perceived available emotional support, e.g. "whenever I am sad, there are people who cheer me up "and the support mobilization e.g. "Whenever I need help, I ask for it". In terms of validity, the scale in previous use showed high positive correlation with convergent measures, such as quality of partnership (.60**) and moderate negative correlations with divergent measures, such as depressive symptoms (-.40**) (Grumer, 2007). In the present study, perceived social support was positively correlated with the engagement coping strategies (.19 < r < .49) in both waves as conceptualized.

Demographics

The study included measures on age, gender (1=male), socioeconomic status (SES), field of study and cumulative grade point average (CGPA).

Age was a continuous variable (years) which participants provided and were crosschecked with other information on their month and year of birth.

Gender was coded as (1) male and (2) female.

The SES was a composite measure of parents' occupation and education level coded on a scale from (1) lowest to (4) highest.

Field of study referred to the two departments of study from which the respondents were sampled and was coded (1) business administration and (2) psychology.

The CGPA, a figure ranging from (0) to (4), is the total number of grade points obtained by the students up to any specified time, divided by the total number of credits for all courses for which the student has registered up to that time. The university provides a yearly transcript of grades to students which include the computed CGPA to inform students of their academic progress. The CGPA of the present sample ranges from a minimum of 2.56 to 3.92 with a mean of 3.25.

Open ended questions

The questionnaire at second wave also included open-ended questions that tapped into respondent's views on their experience of the transition and the national service. The purpose of the open ended questions was to provide a descriptive account and a buttress for the quantitative results for the discussion section. The aim was not to conduct a qualitative analysis. An example of such an item is "Has your national service so far influenced your decision on work and further education afterwards? If yes, please describe in what way the National service has influenced you"

Summary

This chapter described the method of the study. The first wave was gathered with a paper/pencil survey method and the second wave was web-based. Ethical, sampling and procedure as well as the measures used were discussed. All measures used in this study were self-report, established measures with high reliability and validity. They were additionally subjected to pilot testing before the main studies.

5 Results

The findings of the study are presented in this chapter. First, descriptions of the major analytical procedures used, then the results of descriptive analysis are presented. These include internal consistency results, bivariate correlations, factor analysis and other descriptive tests. Then, findings that pertain to the research questions and hypotheses are presented. All descriptive and initial statistical analyses were performed with Statistical Package for the Social Sciences (SPSS) software. More advanced analyses were performed with Mplus6 (Muthén & Muthén, 2010) statistics software.

5.1 Analytical procedures

Several analytical methods were used in the present study including mediation analysis, moderated mediation and residual change scores.

5.1.1 Mediation analysis. Mediation (the term "mediation" is used interchangeably with "indirect effect" in the present study) occurs when the effect of a predictor (the word "predictor" is used synonymously with independent variables, covariates variables and explanatory variables) variable on an outcome (dependent) variable is transmitted by a mediator (Preacher, Rucker & Hayes, 2007). There are several methods to test mediation but the most popular method is by Baron and Kenny (1986) called the *causal steps strategy*. This involves four steps; (1) A regression (association) between the predictor and the outcome. This step is deemed important because it establishes that there is an effect that may be mediated. (2) A regression between the predictor and the mediator. (3) A regression between the mediator and the outcome controlling for the predictor. (4) To establish a complete mediation, the effect of the predictor on the outcome controlling for the mediator should be non-significant. Although these steps are extensively used, it has been argued that a significant total effect (step 1) is not necessary for mediation to occur (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002; Preacher & Hayes, 2008). According to this line of argument, the size of the total effect is smaller if the mediating relationship is distant or complex (as in the perceived work demands-postgraduate intentions relationship) due to additional or competing factors in the mediating process (MacKinnon et al., 2002; Shrout & Bolger, 2002). Thus, in such situations, it is recommended to drop the first step from tests of mediation and instead employ significance tests of the indirect effect, that is, the product of step (2) and (3) above (Preacher & Hayes, 2004).

Bootstrapping is used in the present study to determine whether the size of the mediation is significant (Preacher & Hayes, 2004). Bootstrapping is a resampling method that uses the data collected for a single study, creating many repeated data samples from the single one and making inference from those samples. This allows generating confidence intervals to test the indirect effect for significance (Shrout & Bolger, 2002). When conducting inferential tests with bootstrapping, no assumptions about the shape of the sampling distribution of the statistic are necessary. For hypothesis testing, the null hypothesis of zero indirect effect is rejected at the selected alpha level (e.g., .05) if zero lies outside the corresponding confidence interval (e.g., 95% CI). Such percentile-based CIs can be further improved through bias-correction or bias-correction and acceleration when used in the context of simple mediation models (MacKinnon, Lockwood & Williams, 2004). The one drawback to using bootstrapping is that it yields slightly different CIs each time. This is resolved by setting large resampling draws (5000 in the present case) each time. In the present study, mediation was tested with perceived work demands as predictor, expectancy, subjective value and cost values as mediators and postgraduate intentions as the outcome.

5.1.2 Moderated mediation analysis. When the strength of the relationship between two variables is dependent on a third variable, moderation is said to be occurring with the third variable being the moderator (Preacher, Rucker & Hayes, 2007). Moderation is assessed by a regression with the predictor (independent variable) and moderator variable and an interaction term predicting the outcome variable. The interaction term is the product of the independent variable and the predictor. A significant interaction is evidence of moderation. The interaction effect is then probed to determine at which values or levels of the moderator (typically $M \pm 1SD$) the relationship between the independent and dependent variable has which direction and whether it is significant. James and Brett (1984) coined the term moderated mediation, for mediation models involving relations that require the addition of a moderator for either (1) the relationship between the predictor and mediator or (2) the relationship between the mediator and the outcome variable. Formally, moderated mediation occurs when the strength of an indirect effect depends on the level of some variable, or in other words, when mediation relations are contingent on the level of a moderator. The moderated mediation may then be probed for significance using methods similar to those used to probe significant moderation effects. In the present study, engagement coping, disengagement coping and perceived social support were expected to

moderate the mediation relationship of work demands through expectancies to postgraduate intentions. Technically, since both paths (1) and (2) could potentially be moderated by the coping strategies, both possibilities were explored and was found to be true for the path from perceived work demands to the mediator, expectancies (path 1).

5.1.3 Residual change score analysis. The residual change score was computed in the present study to determine change in individual scores of a study construct. The residual change score is conceptualized as the residual error using the pre-test as the predictor and posttest score as the dependent variable (Williams, Maresh, & Peebles, 1972). The scores indicate whether the observed degree of change for a particular participant was greater or less than the change predicted linearly by the baseline score. A positive residual change score means that a participant had higher follow-up score than expected. A negative score means lower follow-up scores than expected (Frasure-Smith et al., 2000). These scores are used to overcome the problems usually associated with raw change scores including correlations with initial measures which lead to regression to the mean effects. There is zero correlation between the residual score and initial score and therefore does not give an advantage to respondents with certain values of the baseline scores as raw difference scores do (Linn & Slinde, 1977). One limitation of the residual change scores is that it is technically not a measure of change. It does however provide a measure of whether a person's posttest score is larger or smaller than the value predicted (Bergh & Fairbank, 2002). In the present study for instance, residual change scores for postgraduate intentions was used as the outcome in regressions to test which baseline factors predict change in postgraduate intentions.

5.1.4 Missing values. Full information maximum likelihood estimation (FIML) was used to estimate missing values where applicable. This method uses the available data to generate the best possible first and second order moment estimates. Maximum likelihood estimation is considered superior to other commonly used missing data handling methods such as listwise deletion, pairwise deletion, and mean substitution (Wothke, 1998).

5.2 Descriptive results

5.2.1 Factor analysis

The underlying dimensionality of all the study measures was examined with factor analysis. First, there was the need to examine whether the different measures and their underlying factors produced the same number of factors in the present sample as in previous use. Second was the need to determine whether the underlying factors were consistent across the two waves of measurement. Therefore, single-factor models and multiple factor constructs were supposed to show same set of factors at each wave.

In the present analyses, postgraduate implementation intentions (Brandstätter et al., 2003), perceived work demands (Silbereisen & Tomasik, 2011), social support (Schulz & Schwarzer, 2003) and expectancies (Eccles et al, 1983) were proposed as a single factor constructs, based on previous use, and these were upheld for the two waves of data (Appendix B).

The control strategies consist of five strategies namely; Selective primary control, Compensatory primary control, Selective secondary control and Compensatory secondary control-protection and disengagement. Factor analysis of all the items revealed two dimensions, with items for the first three strategies loading together on the first factor and, items for the last two strategies on the second factor. This conforms to previous use of the strategies, conceptualized as the engagement-disengagement divide (Tomasik, et al., 2010). This result was consistent across the two waves. Consequently, in hypotheses testing, the composite engagement and disengagement scales were used.

Factor analyses of all the motivation variables; expectancies and values for both domains revealed that contrary to expectations of three distinct constructs, the attainment, intrinsic and utility items loaded onto one factor. These results were true across the two domains and waves. Although this departs from empirical conceptualization of the subjective sub-values (Eccles et al, 1984), there have been instances in previous studies where similar merging of the sub-value scales occurred (Battle & Wigfield, 2003). For the present study, the combined value scale was used in all further analyses.

5.2.2 Internal consistencies

The internal consistencies of measures in both waves were analyzed by evaluating the Cronbach's alpha reliability coefficient of the scales. Cronbach's alpha is the average value of the reliability coefficients one would obtain for all possible combinations of items when split into two half-tests and, is a measure of how closely related a set of items are as a group. The coefficients were excellent to acceptable (Table 1), according to George and Mallery (2003) rules of thumb ("> .9 – Excellent, > .8 – Good, > .7 – Acceptable, > .6 – Questionable, > .5 – Poor, and < .5 – Unacceptable") (p. 231). None of the variables showed low consistencies for both waves (all αs ≥ .65).

5.2.3 Skewness and kurtosis

Skewness and kurtosis were examined to check deviations from the normal distribution. With regards to skewness, positive or right skewed (> +1) indicates highly endorsed items and; negative or left skewed (<−1) indicates a low endorsement of items (Bulmer, 1979). Kurtosis was evaluated according to the following rules of thumb (Balanda & MacGillivray, 1988): for a normal distribution (≅3); platykurtic (<3); and leptokurtic (>3). Most of the variables were nagatively skewed indicating the endorsement of higher values of the scale. Skewness and kurtosis were below (1) for most of the study variables (table 5.1) with the following exceptions; the social support scale for the second wave was negatively skewed and along with engagement coping and the value scale showed high kurtosis, especially in the second wave, indicating that a large part of the variability in the scores were due to a few extreme scores. The first and second wave education domain value scale also showed high negative skew indicating endorsement of higher values of the scale.

Table 5.1 Means, standard deviations, coefficient alphas, skewness and kurtosis of all study scales for both waves

	Wave	M	SD	Skew	Kurtosis	α
Implementation scale	1	2.10	.48	-.17	-.33	.76
	2	2.20	.44	-.02	-.51	.80
Work demands Scale	1	3.85	1.45	.09	-.79	.82
	2	3.89	1.66	.14	-.90	.88
Social support Scale	1	5.57	1.27	-.85	-.02	.91
	2	5.62	1.52	-1.92	4.30	.94
Engagement coping	1	5.90	1.03	-1.50	3.44	.86
	2	5.91	1.23	-2.08	6.17	.90
Disengagement coping	1	3.83	1.52	.01	-.65	.78
	2	3.35	1.47	.18	-.47	.78
Education domain						
Expectancy scale	1	6.01	.78	-1.19	2.32	.76
	2	6.16	.70	-.90	.41	.71
Value scale	1	6.23	.83	-1.76	3.51	.89
	2	6.36	.74	-1.71	3.06	.86
Cost value scale	1	3.00	1.39	.49	-.34	.63
	2	2.69	1.52	.78	-.28	.76
Work domain						
Expectancy scale	1	5.73	1.01	-.86	.50	.82
	2	5.83	1.11	-1.16	1.19	.89
Value scale	1	5.66	1.22	-.92	.15	.92
	2	5.63	1.30	-1.12	.72	.93
Cost value scale	1	3.19	1.37	.28	-.57	.65
	2	2.89	1.52	.58	-.63	.74

5.2.4 Intercorrelations

The concurrent intercorrelations of all central variables and their relations to demographic variables were examined for both waves (Appendix C).

Five aspects of the intercorrelations were examined: (1) the relations between postgraduate intentions and other variables, notably work demands and expectancies and values, (2) the relations between work demands and expectancies and values, (3) the relations among the expectancies, values and costs, (4) the relations between coping strategies, social support and other study variables, (5) the relations between study variables and sociodemographic characteristics, Effect sizes were deemed small ($r = .10$), medium ($r = .30$), and high ($r = .50$) following Cohen (1992) guidelines.

(1) At wave 1, postgraduate implementation intentions were significantly correlated to education domain expectancies, values and costs and work domain values. Implementation intentions had much stronger correlations with the education domain expectancies, values and costs than with the work domain. At wave two, postgraduate intentions were significantly correlated only to work domain values and costs.

(2) Perceived work demands showed a small negative correlation with postgraduate intentions, and a small but significant correlation with expectancies and costs values in both domains. This seems to lend support to the association between the motivation constructs and further education intentions and also to the mediation relationship hypothesized. At wave two, perceived work demands were significantly correlated with expectancies in both domains and to work domain costs.

(3) With regard to the relations among the motivation variables, same domain expectancies, values and costs were significantly related to each other. Expectancies had a moderate but significant correlation with values and a small but negative correlation with costs within domains. Across domains, expectancy, values and costs variables were respectively and significantly related to each other. In addition, education expectancies was related to work domain values, education values related to work domain expectancies and education costs related to work values. The same pattern of relationships was evident in wave 2 as well. These relationships were in line with previous results (Wigfield & Eccles, 1992; Battle & Wigfield, 2003) and lend support to the theoretical conceptualizations of these variables both as distinct constructs and also as related.

(4) Engagement coping was significantly correlated with all the motivation variables from both domains except work domain costs and with perceived social support. Disengagement coping was likewise significantly correlated with all the motivation variables except education domain expectancies. Both dimensions of coping strategies were significantly correlated with each other and with work demands, providing support for the conceptual relationship between these variables (Tomasik et al., 2010) and with postgraduate intentions. At second wave, the two dimensions of coping strategies were significantly correlated with each other and with social support. Social support was significantly correlated with postgraduate intentions, expectancies and values from both domain and the engagement coping variables.

(5) The correlations of the study variables with demographic variables were rather small. Regarding age, significant positive associations emerged with expectancies and values in the work domain hence, the older the respondents. Gender was significantly and negatively correlated with perceived work demands and with education domain costs. With cumulative grade point average (CGPA), marginally significant correlations were observed with postgraduate intentions values and expectancies in the education domain. Socio-economic status had a small but significant correlation with both age and gender and expectancies in the work domain.

5.3 Hypotheses testing

Hypothesis 1: Do expectancies and values mediate the relationship between work demands postgraduate education intentions?

To test the multiple mediation hypotheses, several regression were estimated simultaneously. The effects of perceived work demands as the predictor on postgraduate intentions as the outcome variable with expectancies, values and costs as mediators were tested and the indirect effects examined. Covariates/controls entered into the model include age, socio-economic status, study major, cumulative grade point average and gender. These analyses were cross-sectional and conducted with first wave variables only. A bootstrapping approach was used because it is suitable for testing multiple mediators simultaneously (Preacher & Hayes, 2008; Shrout & Bolger, 2002). The expectancy and value constructs were domain specific and therefore the work and education domain were analyzed separately. However, all other variables remained the same for both domains of analyses. The results for the two domains are presented separately.

Education domain

Table 5.2 Results of mediation analysis of direct and indirect effects of work demands to Implementation intentions for the education domain

Variables	b	S.E.	Bootstrapping Percentile 95% CI Lower	Upper	R^2
Direct effects					
Expectancies on demands	-0.085**	0.023	-0.130	-0.041	0.047
Values on demands	0.033	0.025	-0.015	0.084	0.061
Cost on demands	0.144**	0.048	0.052	0.238	0.053
Implementation Intentions on;					0.140
Education Expectancies	0.105***	0.031	0.044	0.166	
Education Values	0.144***	0.032	0.078	0.207	
Education Cost	-0.016	0.017	-0.047	0.017	
Work Demands	-0.012	0.016	-0.043	0.019	
Indirect effects of work demands on intentions through;					
Education Expectancy	-0.009*	0.004	-0.018	-0.003	
Education Value	0.005	0.004	-0.002	0.014	
Education Cost	-0.002	0.003	-0.007	0.002	
Total indirect	-0.006	0.007	-0.020	0.007	

Note. $N = 488$. CI = confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$. All effects were controlled for age, socio-economic status, study major, cumulative grade point average and gender.

A significant direct association between perceived work demands and postgraduate intentions (hypothesis 1a) was expected (Table 5.2). However, this prediction was not supported. For the education domain, it was expected that work demands would be positively related with expectancies and values and negatively with costs (hypotheses 1b, 1d & 1f). The results show an unexpected significant negative relationship with expectancies and a significant positive relationship with costs. The relationship with values was not significant. Hence those who perceived high labor market uncertainties had lower further education success expectancies, and

higher further education costs perceptions. The proportion of variance explained by the predictors together were (4.7%) for expectancies and (5.3%) for costs.

A significant positive relationship was predicted between education domain expectancies, values and postgraduate intentions (Hypotheses 1h, 1j & 1l) and a negative relationship with costs. The results show that expectancies and values, but not cost, significantly and positively predicted postgraduate intentions, as hypothesized. This means that respondents who had high further education success expectations and subjective importance were more likely to make postgraduate education plans. The entire set of predictors accounted for (14%) of the variance in postgraduate intentions.

In terms of the indirect paths, it was expected that cost, values and expectancies would mediate the relationship between perceived work demands and implementation intentions however the only significant indirect path was through expectancies. The total indirect path was negative (non-significant) although a positive mediation was hypothesized.

Work domain

For the work domain, a negative relationship was hypothesized between work demands and expectancies and values and a positive relation with costs (hypothesis 1c, e, & g). The results (Table 5.3) were confirmed for expectancies and costs but not for values. Hence individuals high in perceived work demands were also high in work-related costs perception and success expectations. The proportion of variance explained by the predictors were (6.2%) for expectancies and (4.1%) for costs.

Negative associations were expected between work domain expectancies, values and postgraduate intentions (Hypothesis 1i, k) and this was confirmed for values but an unexpected positive relationship was found for expectancies. The relationship between costs values and postgraduate intentions was found not to be significant (Hypothesis 1m). The entire set of predictors accounted for (10.6%) of the variance in postgraduate intentions. In terms of indirect effects, it was expected that work domain cost, values and expectancies would mediate the relationship between perceived work demands and implementation intentions but the only significant indirect path in the work domain was through expectancies. This indicates that the

influence of perceived labor market uncertainties negatively influences work-related expectancies which then affect postgraduate education plans.

Table 5.3 Results of mediation analysis of direct and indirect effects of work demands to Implementation intentions for the work domain

Variables	b	S.E.	Bootstrapping Percentile 95% CI		R^2
			Lower	Upper	
Direct effects					
Expectancies on demands	-0.142***	0.031	-0.201	-0.078	0.062
Values on demands	-0.058	0.036	-0.126	0.017	0.049
Cost on demands	0.151***	0.047	0.058	0.241	0.041
Implementation Intentions on;					0.106
Expectancies	0.053*	0.024	0.005	0.100	
Values	-0.088***	0.019	-0.124	-0.049	
Cost	0.010	0.017	-0.024	0.042	
Demands	-0.016	0.017	-0.047	0.018	
Indirect effects through;					
Expectancy	-0.008*	0.004	-0.016	-0.001	
Value	0.005	0.004	-0.001	0.013	
Cost	0.001	0.003	-0.004	0.008	
Total indirect	-0.001	0.005	-0.011	0.008	

Note. N = 486. CI = confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$. All effects were controlled for age, socio-economic status, study major, cumulative grade point average and gender.

Examining the effect of attrition on cross-sectional mediation results

The mediation analysis was repeated on the baseline data of participants from both waves. The purpose was to investigate the effect of the attrition on the results. The sample was made up of (130), using first wave data of second wave participants.

Education domain

First, the education domain results indicate that the direct relationships from work demands to education domain values ($b=-.011$, $p =$ns) and costs ($b =.094$, $p =$ns) were not significant. The only significant direct relationship was from work demands to expectancies ($b =-.112$, $p < .05$). Work demands ($b =-.014$, $p =$ns) and none of the motivation variables; expectancies ($b =.109$, $p =$ns), values ($b =.062$, $p =$ns) and costs ($b =.020$, $p =$ns) respectively were significant in predicting postgraduate intentions. Consequently, none of the hypothesized mediation paths were significant. Although most of the hypothesized paths were not significant, they generally corresponded, in terms of the direction of the relationships, with the previous results using the full first wave data. That was true, except for the relationship between perceived demands and subjective values, and the relationship between costs values and postgraduate intentions.

Work domain

For the work domain, the results indicate that the association between work demands and education domain expectancies ($b =-.118$, $p =$ns) and values ($b =-.008$, $p =$ns) were not significant. The only significant path being from work demands to costs values ($b =.309$, $p < .001$). In terms of predicting postgraduate intentions, work demands ($b =-.034$, $p =$ns), expectancies ($b =-.014$, $p =$ns), and costs ($b =.025$, $p =$ns) respectively were not significant predictors. However subjective values ($b =-.084$, $p < .01$) significantly predicted postgraduate intentions. None of the hypothesized mediation paths were significant. In this domain as well, although not significant, most of the relationships corresponded, in terms of the direction, with the previous results using the full first wave sample. The exception was the relationship between perceived demands and expectancies.

Hypothesis 2: Engagement coping strategies as a moderator of the mediation relationship between work demands on postgraduate intentions through expectancies, values and costs.

It was hypothesized that engagement and disengagement coping strategies would moderate the mediation relationship between perceived work demands and expectancies, values and costs. With regards to engagement coping, it was expected that the effect of work demands would be weakened with high engagement coping.

To test this hypothesis, interaction terms (work demands*engagement coping and work demands*disengagement coping; using mean centered variables) were used as predictors in a series of regressions in both domains. Results for the education domain are presented first (Table 5.4).

Moderation by engagement coping in the education domain

Table 5.4 Moderation by engagement in the education domain

	b	S.E.	Bootstrapping Percentile 95% CI	
			Lower	Upper
Expectancies predicted by;				
Engagement coping	0.232***	0.042	0.154	0.320
Demands*engagement	0.065**	0.024	0.020	0.113
Values predicted by;				
Engagement coping	0.235***	0.046	0.148	0.332
Demands*engagement	0.044	0.032	-0.026	0.101
Costs predicted by;				
Engagement coping	-0.161*	0.068	-0.297	-0.030
Demands*engagement	-0.020	0.051	-0.121	0.081
Postgraduate Intentions predicted by;				
Engagement	-0.002	0.022	-0.045	0.040
Demands*engagement	-0.005	0.013	-0.030	0.023

Note. N = 488. CI = confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$. All effects were controlled for age, socio-economic status, study major, cumulative grade point average and gender.

The results revealed that for the education domain, the interaction of work demands and engagement coping significantly predicted expectancies, as hypothesized, thus indicating a buffering of the relationship between work demands and education domain expectancies (altogether with the other predictors accounting for 12% of the variance). The interaction term was however not significant in predicting education domain values and costs.

The results also showed that engagement coping significantly and positively predicted expectancies, values and negatively predicted costs in the education domain. These results correspond with the hypothesized relationships (Hypothesis 2b -2d). This means that respondents who used more engagement coping methods were also more likely to have high further education success expectancies and feel that further education was important to them. They were also less likely to feel that further education was not worth the costs. The relationship between postgraduate intentions and engagement coping was not significant.

Given the significant interaction effect on expectancies which is indicative of moderation, the relations were explored further to test effects of high/medium/low engagement (M and +-1SD) on the relationship between work demands and education domain expectancies. The results (Table 5.5) indicated that at high engagement, the relationship between work demands and expectancies is non-significant but at low engagement, there is a negative relationship between work demands and expectancies. In other words, expectancies is more likely to mediate the relationship between work demands and postgraduate intentions in people who are low in engagement coping.

Table 5.5 Predicting expectancies at high/med/low engagement coping

	b	S.E.	Bootstrapping Percentile 95% CI	
			Lower	Upper
Education domain expectancy predicted by;				
Demands at low engagement	-0.018**	0.007	-0.035	-0.008
Demands at mid engagement	-0.011*	0.004	-0.021	-0.004
Demands at high engagement	-0.004	0.004	-0.012	0.003

Figure 5.1 Relationship between work demands and education domain expectancies at high and low level of engagement coping.
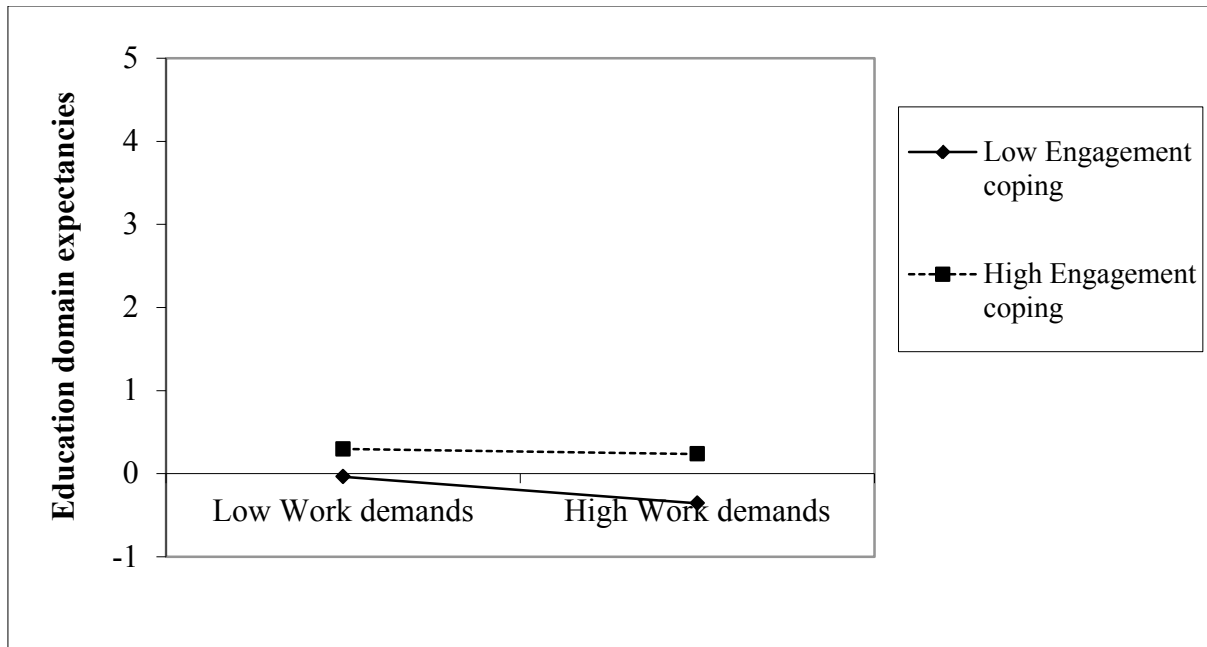
Moderation by engagement coping in the work domain

The results from the work domain (Table 5.6) indicate that the interaction term (work demands*engagement coping) was not significant in predicting any of the work domain mediating variables-expectancies, values and costs, indicating no moderation effects. Hence no further moderation tests were carried out.

However, engagement coping significantly and positively predicted work domain expectancies and values as hypothesized (Hypothesis 2e -2g). The predictors together accounted for (13.5%) and (9.7%) of variance in expectancies and values respectively. Therefore, respondents who used more engagement coping methods were also more likely to have high work success expectancies and feel that working was important to them. Engagement coping was however not significant in predicting costs values or postgraduate intentions although the direction of the relationships were in line with hypotheses.

Table 5.6 Results of moderation by engagement in the work domain

	b	S.E.	Bootstrapping Percentile 95% CI	
			Lower	Upper
Expectancies predicted by;				
Engagement coping	0.295***	0.060	0.180	0.414
Demands*engagement	0.046	0.037	-0.030	0.117
Values predicted by;				
Engagement coping	0.277***	0.066	0.141	0.401
Demands*engagement	0.027	0.040	-0.051	0.106
Costs predicted by;				
Engagement coping	-0.055	0.068	-0.176	0.091
Demands*engagement	-0.046	0.041	-0.125	0.037
Intentions predicted by;				
Engagement	0.062	0.024	0.015	0.110
Demands*engagement	0.009	0.016	-0.020	0.042

Note. N = 486. CI = confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$. All effects were controlled for age, socio-economic status, study major, cumulative grade point average and gender.

Hypothesis 3: Disengagement coping strategies as moderator of the mediation relationship between work demands on postgraduate intentions through expectancies, values and costs

The moderating influence of disengagement on the mediating relationship between perceived work demands on postgraduate intentions through expectancies, values and costs were investigated. The results are again presented separately for the education and work domains.

Moderation by disengagement coping in the education domain

Table 5.7 Results of moderation by disengagement coping in the education domain

	b	S.E.	Bootstrapping Percentile 95% CI Lower	Upper
Expectancy predicted by;				
Disengagement coping	0.027	0.023	-0.022	0.068
Demands*disengagement coping	0.005	0.015	-0.028	0.031
Values predicted by;				
Disengagement coping	0.057*	0.024	0.008	0.100
Demands*disengagement coping	-0.023	0.016	-0.058	0.006
Costs predicted by;				
Disengagement coping	0.096*	0.041	0.014	0.184
Demands*disengagement coping	0.047	0.031	-0.018	0.103
Postgraduate Intentions predicted by;				
Disengagement	-0.033*	0.014	-0.059	-0.004
Demands*disengagement coping	0.001	0.010	-0.017	0.019

Note. N = 486. CI = confidence interval. * p < .05. ** p < .01. *** p < .001. All effects were controlled for age, socio-economic status, study major, cumulative grade point average and gender.

The results (Table 5.7) indicated that the interaction term (work demands*disengagement coping) was not significant in predicting any of the education domain motivation variables – expectancies, values and costs contrary to expectations (Hypothesis 3h-3j). Hence, the moderation hypothesis was not supported.

Disengagement coping was expected to be negatively related with education domain expectancies and values and positively with costs (Hypothesis 3b -3d). The results indicated that disengagement coping was significantly and positively related to education domain values and costs but not expectancies. The relationship to values was the opposite of what was expected. This means that those who use more disengagement coping in dealing with uncertainties were also more likely to value further education and to have high further education costs perceptions. Furthermore, there was also a significant negative relationship between disengagement coping and postgraduate intentions which means that those who use more disengagement coping strategies were less likely to make further education plans, in line with the hypothesis (Hypothesis 3a). The proportion of variance explained by the predictors together were (7.8%) for values (7.1%) for costs and (15.3%) postgraduate intentions.

Moderation by disengagement coping in the work domain

For the work domain, the results (Table 5.8) indicated that the interaction term (work demands*disengagement coping) significantly predicted work domain expectancies but not values and costs. This indicates moderation by disengagement coping of the relationship between work demands and work domain expectancies.

The results also indicated that disengagement coping significantly and positively predicted work domain expectancies and values, although a significant but negative relationship was hypothesized (Hypothesis 3e -3f). This means that those who employ more disengagement coping methods to deal with uncertainties were also more likely to feel that they would succeed in work and also feel the subjective importance of working after their service. The proportion of variance explained by the predictors were (12%) for expectancies and (7.8%) for values. The

positive relationship predicted between disengagement coping and work domain cost values was in the right direction but not significant.

Table 5.8 Results showing moderation by disengagement in the work domain

	b	S.E.	Bootstrapping Percentile 95% CI	
			Lower	Upper
Expectancy predicted by;				
Disengagement coping	0.086**	0.031	0.023	0.147
Demands*disengagement	0.048*	0.021	0.005	0.088
Values predicted by;				
Disengagement coping	0.190***	0.038	0.119	0.268
Demands*disengagement	0.007	0.022	-0.037	0.048
Costs predicted by;				
Disengagement coping	0.075	0.046	-0.012	0.167
Demands*disengagement	0.022	0.030	-0.036	0.082
Intentions predicted by;				
Disengagement	-0.020	0.015	-0.050	0.009
Demands*disengagement	-0.004	0.010	-0.024	0.017

Note. $N = 486$. CI = confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$. All effects were controlled for age, socio-economic status, study major, cumulative grade point average and gender.

Given the significant interaction effect in predicting expectancies, the relations were explored to investigate the extent to which the different levels of disengagement affected the relationship between work demands and work domain expectancies.

Table 5.9 Predicting expectancies at high/med/low disengagement coping

	b	S.E.	Bootstrapping Percentile 95% CI	
			Lower	Upper
Work domain expectancy predicted by;				
Demands at low disengagement	-0.015*	0.007	-0.032	-0.005
Demands at medium disengagement	-0.010*	0.004	-0.020	-0.003
Demands at high disengagement	-0.004	0.003	-0.012	0.001

Figure 5.2 Relationship between work demands and work domain expectancies for a high and low level of disengagement coping.
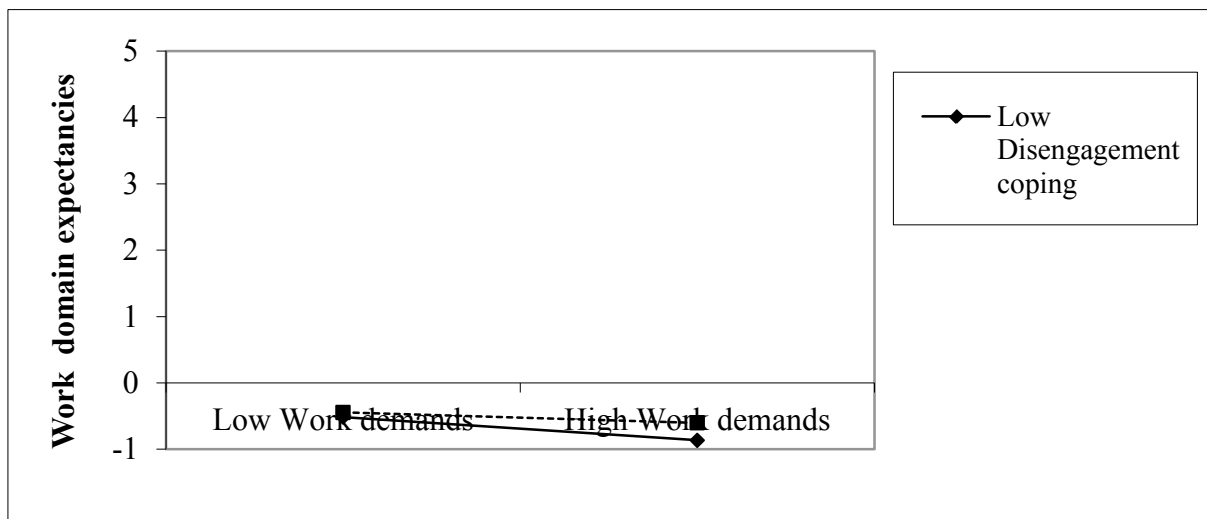
The results of the moderation analysis of disengagement coping on the relationship between work demands and expectancies reveal a similar relationship as in the education domain (Table 5.9). Disengagement coping appears to buffer the relationship between work demands and work

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domain expectancies such that the higher the level of disengagement, the weaker the strength of the relationship between work demands and expectancies. At high disengagement, the negative relationship between work demands and expectancies is non-significant and only exists at low and medium disengagement.

Hypothesis 4: Perceived social support as a moderator of the mediation relationship between work demands and expectancies in both domains

The next step in the analysis involved investigating the moderating influence of social support in the mediation relationship between work demands through expectancies, values and costs in both domains to postgraduate intentions. The results for the education domain are presented first.

Moderation by perceived social support in the education domain

The results (Table 5.10) first indicate that the interaction term (work demands*social support) was not a significant predictor of any of the education domain motivation variables; expectancies, values and costs (Hypotheses 4h-4j). Therefore, barring any further moderation investigation.

The results further indicated that social support significantly predicted education domain expectancies and values (Hypotheses 4b-4c) in line with predictions. This means that respondents with high perceived social support were more likely to perceive high education related success expectations and subjective importance of further education. The proportion of variance explained by the predictors together were (11.3%) for expectancies and (10.2%) for values. The hypothesized relations between social support with postgraduate intentions and education domain costs were not supported (Hypotheses 4a, 4g).

Table 5.10 Results showing moderation by social support in the education domain

	b	S.E.	Bootstrapping Percentile 95% CI	
			Lower	Upper
Expectancy predicted by;				
Social support	0.162***	0.029	0.106	0.222
Demands*support	0.020	0.019	-0.017	0.059
Values predicted by;				
Social support	0.135***	0.032	0.072	0.199
Demands*support	-0.011	0.024	-0.057	0.039
Costs predicted by;				
Social support	0.054	0.052	-0.044	0.158
Demands*support	0.021	0.043	-0.068	0.101
Intentions predicted by;				
Social support	0.029	0.018	-0.007	0.063
Demands*support	-0.012	0.014	-0.041	0.015

Note. N = 486. CI = confidence interval. * p < .05. ** p < .01. *** p < .001. All effects were controlled for age, socio-economic status, study major, cumulative grade point average and gender.

Moderation by perceived social support in the work domain

For the work domain, the results (Table 5.11) show that again, the interaction term (work demands*social support) was not a significant predictor of work domain expectancies, values and costs, thereby disproving the moderation hypothesis proposed (Hypotheses 4k-4m). Social support turned out a significant positive predictor of work domain expectancies and postgraduate

intentions but was not significant in predicting values and costs (Hypotheses 4a-4g). This means that the higher the perceived support, the higher the perceived work success expectancies and the more likely respondents are to make postgraduate education plans. The proportion of variance explained by the predictors together were (9.3%) for expectancies and (13%) for postgraduate intentions.

Table 5.11 Results of moderation by social support in the work domain

|	b	S.E.	Bootstrapping Percentile 95% CI Lower	Upper
expectancy predicted by;				
Social support	0.141***	0.039	0.067	0.217
Demands*support	-0.003	0.028	-0.055	0.053
Values predicted by;				
Social support	0.083	0.048	-0.007	0.182
Demands*support	-0.016	0.033	-0.078	0.050
Costs predicted by;				
Social support	0.050	0.051	-0.052	0.145
Demands*support	-0.006	0.044	-0.093	0.079
Intentions predicted by;				
Social support	0.061**	0.018	0.025	0.096
Demands*support	-0.013	0.014	-0.040	0.013

Note. N = 486. CI = confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$. All effects were controlled for age, socio-economic status, study major, cumulative grade point average and gender.

Hypothesis 5: Is there significant change in the study variables across the two waves?

The stability of study variables across the 2 waves was examined by looking at the correlations of the same construct at both waves.

Table 5.12 Intercorrelations of the same construct across the two waves.

Variable	Correlation wave 1 and 2
Intentions	.62**
Work demands	.49**
Expectancies education	.55**
Values education	.55**
Cost education	.27**
Expectancies work	.52**
Values work	.58**
Costs work	.24*
Engagement coping	.17
Disengagement coping	.41**
Support	.24*

Note. N = 130. *$p<.05$ **$p<.01$

Over the study period, most of the study variables exhibited relative rank stability. Postgraduate intentions showed the most stability and perceived work demands, expectancies and values also exhibited rank stability. However, costs values associated with either work or further education showed less stability. The engagement coping strategies; comprising of compensatory primary control (CPC), secondary primary control (SPC) and selective secondary control (SSC) showed non-significant intercorrelations indicating changes (rank movement) among individuals in engagement levels across the study period. Since rank-order tests only measure one type of change, t-tests were conducted to investigate mean-level change.

A paired sample t-test was used to investigate whether there was significant mean-level change across waves for each variable under consideration. The results are presented in (Table 5.13).

Table 5.13 T-test results testing mean-level change in variables across waves

	M	SD	Std. Error Mean	t
Postgraduate Intentions	-.04	.39	.039	-.807
Work demands	.11	1.56	.154	.685
Social support	.00	1.63	.171	.014
Engagement	.20	1.32	.132	1.527
Disengagement	.44	1.59	.159	2.774**
Education domain				
Expectancies	-.11	.66	.063	-1.760
Subjective values	-.04	.69	.068	-.532
Costs	.31	1.70	.165	1.870
Work domain				
Expectancies	-.19	1.07	.104	-1.801
Subjective values	-.12	1.21	.120	-1.045
Costs	.29	1.79	.173	1.625

Note. N = 130. **$p<.01$

The results indicate relatively strong mean-level stability of most of the variables across waves. However, the disengagement coping strategies (consisting of compensatory secondary control-protection (CSP) and disengagement (CSD)) showed significant mean change across the two waves. A further look indicates that the respondents became less disengaged over the study period. The picture emerging is that with the transition out of the university, the respondent's perceptions of labor market uncertainties, their postgraduate plans and their work and further education expectancies and values, on average, exhibited little change. However, what showed significant change was the manner in which they cope and deal with uncertainties. There were

changes in rank level of engagement strategies among the respondents and the overall level of disengagement strategies decreased.

Hypothesis 6: Which factors predict residual change in postgraduate intentions?

To investigate this research question, two regression analyses were conducted with residual change scores in postgraduate intentions as the outcome.

1. For the first regression, the predictors were; residual change scores of expectancies, values and costs in both domains and second wave work demands scores. The purpose for using residual change scores was to investigate whether the change indicated in these scores predicted change in postgraduate intentions. However, second wave work demands scores were used because, the work demand items for wave 2 asks retrospectively about perceptions of uncertainties in the last year (all second wave demand items were introduced with "When considering the past year ..."), therefore it suitably addresses the perceptions of uncertainties over the year under consideration.

In addition, in line with our hypotheses that change work demands could potentially lead to change in expectancies and values which could in turn produce change in postgraduate intentions, second wave work demands was used to predict expectancies, values and costs in both domains. Residual change in engagement and disengagement coping strategies and social support were also included in the analysis but the results were non-significant.

The results revealed that none of the factors were significant in predicting residual change in postgraduate intentions. In addition, only few of the regressions predicting the motivation variables were significant.

- Second wave work demands (b= -0.159, p<.05) and residual change in engagement significantly predicted residual change in work domain expectancies (b= 0.323, p<.01) explaining (21.6%) of variance in expectancies.

- Residual change in engagement further significantly predicted residual change in education domain expectancies (b= 0.302, p<.05) with (18.9%) in explained variance.

- Residual change in perceived social support significantly predicted residual change in work domain values (b= -0.335, p<.01) with (19.7%) in explained variance.

2. In the second regression, the predictors were first wave work demands, expectancies, values and costs, engagement, disengagement and perceived social support. The purpose was to investigate whether these baseline scores significantly predicted residual change in postgraduate intentions. As in all the regression analysis conducted, these were controlled for age, socio-economic status, course major, cumulative grade point average and gender.

The results of the regression analysis showed that the only significant predictor of residual change in intentions was baseline perceived social support (b= 0.161, p<.05) accounting for (9.7%) of the variance. This means that respondents with high perceived social support at baseline were more likely to indicate positive changes in their postgraduate intentions across the study period.

Summary

In this section, cross-sectional and longitudinal associations among perceived work demands perceived social support, coping strategies, expectancies, values and implementation intentions were presented. The results indicated support for the mediation relationship between perceived work uncertainties and postgraduate intentions through expectancies but not values and costs. Support was also found for the moderating role of engaged and disengaged coping, but not perceived social support, on the relationship between perceived work demands and expectancies. Longitudinally, on the most part, the study variables generally showed stability and continuity, at the mean level, across the study period except for disengagement coping which decreased over the period. Perceived social support at first wave was found to be a significant predictor or residual change in postgraduate intentions at second wave.

6 Discussion

The present study investigated the transition of Ghanaian tertiary students out of the university to work and how the experience of the mandatory national service affects this transition. The sample consisted of final-year tertiary level students (*N*= 504 at baseline, 133 at second wave) from two fields of study, psychology and business administration. As a framework to guide the study, the Jena model of social change and human development (Silbereisen et al., 2006) was combined with the Eccles et al. expectancy-value model (Wigfield & Eccles, 2000) in addition to aspects of the implementation intentions theory (Gollwitzer, 1993). The participants were assessed on their; work-related uncertainties; expectancies and subjective values in further education and work; coping strategies; perceived social support; and on their further education intentions. On the basis of these theories and building on previous research, the present study investigated whether the social change-related work uncertainties, perceived by final year Ghanaian students, influenced their intentions to pursue further education. The role of their success expectancies, subjective values, coping strategies and perceived support in relation to their perceived demands and postgraduate intentions was also examined. In this final section, the findings of the study are discussed in line with the hypotheses proposed. To buttress the findings and the interpretations made from statistical results, quotations from open-ended answers from participants during the second wave are woven in. Limitations of the present study, directions for future research, potential applications and conclusions are also presented.

Table 6.1: Overview of Hypotheses and Findings

Hypothesis		Findings
Hypothesis 1-Direct and indirect effects of perceived work demands on postgraduate intentions		
Hypothesis 1.	The relationship between work demands and postgraduate intentions will be mediated by expectancies, values and costs in both domains.	Supported for only expectancies in both domains but not values and costs
Hypothesis 1a	Positive association between work demands and postgraduate intentions.	Negative, non-significant relationship found

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Education domain

Hypotheses 1b	Positive relationship between work demands and expectancies	**Significant negative relationship**
Hypotheses 1c	Positive relationship between work demands and values	Non-significant
Hypothesis 1f	Negative relationship between work demands and costs	**Significant positive relationship found**
Hypothesis 1h, 1j	Positive relationship between expectancies/ values and postgraduate intentions	**Supported**
Hypothesis 1l	Negative relationship between cost values and postgraduate intentions	Not supported

Work domain

Hypotheses 1d	Negative relationship between work demands and expectancies	**Supported**
Hypotheses 1e	Negative relationship between work demands and values	Not supported
Hypothesis 1g	Positive relationship between work demands and costs	**Supported**
Hypothesis 1i	Negative relationship between expectations and postgraduate intentions	**Significant positive relationship found**
Hypothesis 1k	Negative relationship between values and postgraduate intentions	**Supported**
Hypothesis 1m	Positive relationship between cost values and postgraduate intentions	Not supported

Hypothesis 2   The moderating effect of engagement coping strategies

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Hypothesis 2a	Engagement coping will be positively related to postgraduate intentions	Not supported
Hypothesis 2b -2e	Positive relationship between engagement coping and expectancies and values in both domains	**Supported**
Hypothesis 2f -2g	Positive relationship between engagement coping and costs values in both domains	**Supported only for education** domain costs
Hypothesis 2h-2j	The higher the engagement, the weaker the mediation of work demands on postgraduate intentions through expectancies, values and costs	Moderation by engagement **supported for only the relationship between work demands and education domain expectancies** Not supported for values and costs in both domains

Hypothesis 3	**The moderating effect of disengagement coping strategies**	
Hypothesis 3a	Disengagement coping will be significantly but negatively related to postgraduate intentions	**Supported**
Hypothesis 3b -3c	Negative relationship between disengagement and expectancies in both domains	**Positive relationship was found with work domain expectancies**
Hypothesis 3d -3e	Negative relationship between disengagement and values in both domains	**Positive relationship with values in both domains.**
Hypothesis 3f -3g	Positive relationship between disengagement coping and costs in both domains	**Positive relationship with education domain costs.**
Hypothesis	The higher the disengagement, the stronger	Moderation by disengagement

3h-3j	the mediation of work demands on postgraduate intentions through expectancies, values and costs	**Supported for only the relationship between work demand and work domain expectancies.**

Hypothesis 4	**The moderating effect of perceived social support**

hypothesis 4a	Positive relationship between social support and postgraduate intentions	**Supported only for the work domain** but not the education domain
Hypotheses 4b-4e	Positive relationship between social support and expectancies and subjective values in both domains	**Supported for expectancies in both domains and education domain values**
Hypotheses 4f-4g	Positive relationship between social support and costs values in both domains	Not supported
Hypotheses 4h-4j	The indirect effect of work demands on postgraduate intentions through expectancies, values and costs will be stronger when perceived social support is high	Not supported

Longitudinal hypotheses

Hypothesis 5	**Significant changes are expected in the study variables across the study period.**

Hypothesis 5	Increase (mean-level) in perceived work demands, postgraduate intentions, engagement coping, education domain expectancies and values and work domain costs values were expected across the study	Not supported

	period	
	Decrease (mean-level) in disengagement coping, work domain expectancies and values and education domain costs	**Supported for only disengagement coping**
Hypothesis 6	Increase in perceived work demands, education domain expectancies and values and work domain costs would be associated with increase in postgraduate intentions	Not supported
		Perceived social support at baseline significantly predicted residual change in postgraduate intentions
	Decrease in work domain expectancies and values and education domain costs would be associated with increase in postgraduate education	Not supported

The first aim of the present investigation was to examine the generalizability of the theoretical models and scales in the current context. Results from two pilots and the main studies successfully demonstrated the feasibility and applicability of the expectancy-value model and the Jena model of social change and human development in the Ghanaian context. The results revealed satisfactory and distinct constructs with similarities in the functioning of the variables compared with previous use. As an example, work demands, conceived as a stressor, showed significant but small correlations with both coping dimensions, engagement ($r = .14^{**}$) and disengagement ($r = .17^{**}$). The motivation variables, expectancies and values also showed significant, within domain, correlations as conceptualized and significantly predicted postgraduate intentions; an achievement outcome (Appendix C). One point worth mentioning here has to do with the subjective values sub-scales. The subjective value components made up of attainment, utility, intrinsic and costs values, are generally conceptualized as distinct constructs that represent different aspects of subjective values (Eccles et al., 1983). With the present sample, it was found that three of the components; attainment, utility and intrinsic values, were

empirically indistinguishable and loaded on a single factor in factor analysis. A look at the literature showed mixed results and several reasons could potentially account for the empirical differences in the subjective values. The first has to do with age effects; it has been observed that the correlation amongst the value sub scales gets higher with age. This explains the difference between previous use (among secondary school students) and current use. A second explanation (Battle & Wigfield, 2003) is that in the studies where distinct values components were realized, the tasks concerned, such as study of mathematics were current pursuits (Eccles et al., 1983). However, postgraduate education is a task in the future and thus more difficult to separate enjoyment (intrinsic value) from personal salience (attainment value). Although the present study merges all three value components, a similar explanation could equally apply in this situation. A third plausible reason may be that in some collectivistic contexts, the lines between personal interests, collective interests and what are essential for the future are blurred (Iyengar & Lepper, 1999), which would explain the students inability to distinguish attainment, utility and intrinsic importance. Therefore, in all subsequent analyses, the three sub-values were composited. This combined subjective value construct conceptualizes the importance of the task to the individual.

6.1 Perceived labor market uncertainties and postgraduate education plans, the role of success expectancies and subjective values (hypothesis 1)

The first hypothesis was a proposed multiple mediation where expectancies, subjective values and costs values mediated the relationship between perceived occupational uncertainties and postgraduate intentions. First, however, the direct relationships will be discussed. Perceived work demands was found to be significantly and negatively related to expectancies in both domains. The higher the work related uncertainties, the lower the success expectations associated with work and further education after the national service. This is in line with what was hypothesized for the work domain, and with previous findings which point to the association between work-related stress and work goal attainability (Çayirdağ, 2012; Dietrich et al, 2012). However, for the education domain, the direction of the result is negative although a positive relationship was hypothesized. Divergent relationships among the two domains were expected, with high education domain expectancy and value scores corresponding with low work domain expectancy and value scores. However, expectancies in both domains ($r = .397^{**}$) acted similarly as significant predictors of implementation intentions and as outcomes of perceived demands. The positive association of expectations in both domains with postgraduate intentions is reasonable

because they are both achievement domains. It may also suggest that the respondents perceive both domains as parallel pursuits and consider further education as a prerequisite for successful career (Gondwe & Walenkamp, 2011). This perception is attributed to the phenomenon of "educational deepening" (Boateng & Ofori-Sarpong, 2002, p. 6) or "credentialism" (Côté & Allahar, 1994, p. 36). This is the situation where more education is needed to qualify for jobs than was required for the same jobs in the past. The open-ended responses provided by respondents in the study seem to reflect their intentions of both working and schooling at the same time:

> "I need both (work and education) to complement each other, so I can achieve my goals."

> "I prefer to be attaining income from work and schooling at the same time"

This further raises the issue of the feasibility for new graduates to work and study simultaneously in Ghana. With the exception of special programs like the executive master of business administration (EMBA) targeted at management level professionals, most master level courses do not make provisions and may discourage concurrent working and studying. Study leave is only available after a number of years on the job. However, some new graduates may still try despite the challenges with comments such as;

> "I (would like) a flexible work schedule which will enable me further my education."

> "Combining work and school and marriage and children (I) admit, would not be an easy task. But I consider it a necessary evil if I am to attain my career goals"

Other direct relationship results indicated that perceived work demands were significantly and positively associated with subjective values for further education, in line with our hypotheses and with reports that work-related uncertainties lead to students exaggerating the importance and usefulness of a postgraduate degree (Grix, 2001). However, the relationship between perceived work demands and subjective values in the work domain was not significant. This means respondents work uncertainties had no relation with whether or not they perceived work as important. The findings also indicated that the student's values in both domains were equally high, again, suggesting that the students consider both domains as similarly important and useful. This is corroborated by some of the respondent's comments, which point to work-utility reasons for pursuing a postgraduate degree for reasons.

"I would like to further (education) because then I am likely to earn more"

"I think furthering my education is good for better job and promotion as well."

Perceived work demands were also significantly related to work and education domain costs. This means that individuals who perceived high work related uncertainty also perceived high costs associated with working and further education. Costs values are the negative aspects of a task, in this case measured as the individual's perception of whether work and further education are worth the time and effort they require. The results showed that those who perceived high labor market uncertainties were also more likely to perceive work and postgraduate education as not worth the effort. Work demands and costs values are more negative perceptions and a plausible explanation is that people who perceive more macro level uncertainties may generally extend this pessimism to their work and further education aspirations.

The direct relationships between subjective values and postgraduate intentions were also examined. Values (both domains) were significantly related to postgraduate intentions but with different directions. Respondents who considered further education as important were more likely to make plans for postgraduate education, and those who considered the work domain as important were less likely to make further education plans. These results are consistent with the hypotheses and with research that suggests that goal appraisals, which include goal importance and attainability, are heightened during the transition from school to work (Dietrich et al, 2012) and with similar findings where subjective task values significantly predicted college women's graduate school intentions (Battle & Wigfield, 2003).

The relationship between cost values in both domains and postgraduate intentions were not significant meaning costs considerations did not rank highly in postgraduate planning. Battle and Wigfield (2003) had similar findings in their study. They took this to indicate a departure from the times when negative aspects were the primary considerations of career and education goals. Indeed, the results suggest that the respondents generally had low costs perceptions of work and further education, pointing towards an overall positive attitude or perhaps an idealistic or unrealistic outlook considering the uncertain economic and employment context. Arnett (2000) reported similar high optimism with regards to emerging adults most notably, among minority groups and those from low socio-economic backgrounds. Despite gloomy economic prospects and general bleak outlook for their generation, these youth viewed their own financial and career

prospects as very bright. This positive outlook was attributed to a form of optimistic bias; the belief that unpleasant things are more likely to happen to others than to themselves (Weinstein, & Klein, 1996). A similar explanation may hold in the present situation with respondents reporting high expectations for succeeding in both work and further education and also a majority having intentions for postgraduate education.

Although the direct relationship between perceived work demands and postgraduate intentions was not significant, the mediation through expectancies, but not values and costs, in both domains was significant. This translates as the lower the anxieties and challenges experienced by the students, the higher their expectancies for success in either work or further education and the higher the likelihood of making postgraduate implementation intentions. The results indicated a non-significant total indirect effect of work demands on postgraduate intentions. This is contrary to what was hypothesized and to reports that cite occupational uncertainty as a factor in increasing postgraduate enrollments (Blossfield, et al, 2005; Gutman, et al, 2012). A look at respondent's comments showed that some did associate work uncertainties, such as unemployment and the diminished value of the bachelor's degree, with the need to pursue further education. Others exhibited the indecisiveness that has been reported as characteristic of contemporary graduates which leads them into pursuing further education;

> "Due to the competitive nature of work in Ghana, I will like to enhance my qualification before I enter into the field of work."

> "Furthering my education after my service is important to me because in our country now, the bachelor's degree does not really help in securing a good job. And also I would like to do something I really love"

> "I would want to further my education after service but if I get a good job, I may want to reconsider my decision"

> "(I) do not really have plans of continuing school after service, but I would also have a clearer picture about that after my service."

Generally though, the participants showed low levels of perceived work demands, in line with their position as well educated students. Previous research has noted that the educational institution acts as a filter that cushions students from perceiving the effects of uncertainties. Also,

individuals with higher education generally report lower load of demands (Silbereisen & Tomasik, 2011). Moreover, their lack of work experience may make labor market uncertainties more abstract and less realistic for them, hence the inability to directly associate work related uncertainties with their postgraduate intentions.

6.2 Being engaged or disengaged, what does it mean for relations between perceived work uncertainties and success expectancies? (Hypothesis 2 and 3)

In the present study, the participants coping strategies, measured as engagement and disengagement coping, were assessed. Primarily, the goal was to investigate whether the coping strategies buffered the effect of perceived work demands. First, the direct relationships will be discussed. The results indicated that engaged coping was positively and significantly associated with expectancies and values in both domains and negatively with education domain costs as hypothesized. This means that respondents who utilized more engagement coping strategies were likely to have high success expectations and perceived both work and further education to be important. Also, they were less likely to endorse high costs associated with further education. This is in line with the life-span theory of control specifying that individuals engaged in pursuing a goal are usually inclined to perceive only the positive aspects of the goal (Heckhausen et al., 2010). This coupled with previous reasoning that both domains are perceived as similar means that students who have high education expectations may extend these high expectations to the work domain and may generally approach the work domain with the same level of engagement as with the education domain. With respect to the relationship between engagement and costs values, it is probable that when people engage fully in a task, they are unlikely to perceive the tasks as unworthy of effort and time.

Other direct relationships revealed that those who were high in disengagement coping were less likely to make further education plans and more likely to perceive further education as not worth the effort and time it takes, in line with our predictions. In addition, disengagement coping was positively related to values in both domains and education domain expectancies. This suggests that high disengagers also perceived high subjective values in both domains and high further education success expectations, which is contrary to hypothesized directions. In a similar observation, Tomasik et al, (2008) found that high school youth who were disengaged from finding an apprenticeship, at the same time, had high aspirations which were not commensurate

with their actual school achievement. A probable explanation is that the disengagement could be a reflection of the uncertain context, employed as a protection from frustration, while still maintaining their long term aspirations. Support for this explanation comes from a latent class study into typologies of engaged and disengaged English youth (Ross, 2009). The study identified four types of engaged and disengaged youth people including a category who were disengaged from school but not from education. This disengaged group, forming (23% to 26%) of the population, were involved in truant and risky behaviors but maintained their high aspirations and eventually make good grades.

The moderated mediation results indicated that engagement coping moderated the relationship between perceived work demands and expectancies in the education domain, as expected, but not in the work domain. The negative association between work demands and further education expectancies is significant only when the respondents are less engaged. In other words, among respondents who use less engagement coping, perceived work uncertainties had a negative impact on their expectations for further education. However among those who were high in engagement coping, perceived work uncertainties had no effect on their education related success expectations. This seems to suggest that the manner in which individuals cope with uncertainties buffers the effect of such uncertainties on their goal appraisals (Connor-Smith & Compas, 2004; Schmitz & Skinner, 1993) and as Haase et al. (2008) demonstrated, goal engagement might be particularly beneficial under unfavorable societal conditions.

Disengagement coping also buffered the relationship between perceived work uncertainties and work domain expectancies but contrary to what was expected, the higher the disengagement, the less significant the negative association between work demands and expectancies in the work domain. Respondents high in disengagement were less likely to translate the negative effects of work uncertainties on their work-related success expectancies. In contexts like the present, youth negotiating their way into adulthood, undoubtedly, have to endure lots of difficulties (Langevang, 2009). It is therefore probable that adjustment to unattainable goals might be more important and adaptive, and even work in the same manner as engagement coping. It has been suggested that in cultures where the self is seen as more pliable than the environment or in unchangeable situations, coping by targeting the self (as against engaging the environment) may be more effective, prevalent and adaptive (Tweed, White & Lehman, 1998). The ability to mentally distance oneself from distressing conditions, especially uncontrollable

ones like social change-rooted uncertainties, may be a useful skill to have and lessens the impact of adverse conditions. These skills have been linked to the increasing probability that future attempts to exert control will be successful and thus, produce many of the same benefits as primary control (Aldwin, Skinner, Zimmer-Gembeck, & Taylor, 2011), thus, helping individuals focus on more positive goals and appraisals (Connor-Smith & Compas, 2004). It has further been suggested that these efforts to "bend" in the face of adversity can be used as primary coping strategies any time that attempts to change the world would be inappropriate, upset relationships, consume too many resources, or threaten other goals that are more important (Aldwin et al., 2011).

6.3 Does perceived social support matter in the relationship between perceived work demands and postgraduate intentions? (Hypothesis 4)

Prior research has addressed the notion of perceived social support as stress buffer and also as an external and important contributory factor in achievement appraisals and outcomes (Crockett et al., 2007). The current study expanded upon this by investigating the buffering effect of perceived social support in the mediation relationship between perceived work demands and postgraduate intentions through expectancies, values and costs. The result showed first that the moderation hypothesis was not supported and that the support of others was not related with whether or not perceived uncertainties influenced aspirations. A reason for this may lie in the argument that in contexts where uncertainties and strain is a more normative occurrence, the strain ceases to affect relations with supportive others and furthermore, support is provided, or in this case perceived, irrespective of difficulties and uncertainties (Lincoln, Chatters & Taylor, 2003).

Perceived social support was positively associated with education domain expectancies and values but not costs. In the work domain, perceived social support was significantly and positively associated with expectancies but not values and costs. This means that those who perceived high social support were more likely to have high work and education expectations and also place high values in further education. The relationship between perceived social support and postgraduate intentions was significant only for the work domain. Therefore having high social support influenced the plans that were made for further education, but only when not controlling for education domain expectancies. This is in line with research backing the influence

of social support in achievement-related outcomes through the individual's motivational mechanisms, and the present results provide additional support for this association (Ahmed et al., 2010; Hamdan-Mansour & Dawani, 2007; Mackinnon, 2012). Evidently, for the present sample, a strong supportive network is helpful with regards to their education goals and their goal appraisals. This is not surprising since Ghana falls more to the collectivistic end of the individualistic-collectivistic continuum, and communal values such as family are emphasized. Most people are born into extended families or clans that provide support and protection (Akotia & Barimah, 2007). Moreover, young people, especially, tend to emphasize the importance of social networks, and make use of groups and associations based on kinship, neighborhood affiliation, religion, employment, etc., as they navigate towards their goals (Langevang, 2009).

6.4 Change across the transition (hypothesis 5)

Investigating the changes that occurred over the transition out of the university was an important goal of the present study. Based on the assumption of shared pathways, change in all the study variables was examined. The results indicated that across the study period, most of the study variables exhibited significant stability and continuity, on average, with a few exceptions. Repeated measures t-test analysis results revealed mean-level stability over the study period, in most of the study variables, contrary to predictions of change. For instance, perceived work-related demands, at the mean level, were expected to increase based on the reasoning that leaving the university and starting work would heighten the perception of work-related uncertainties due to the faced reality of unemployment and other work-related issues. But this was not the case. The level of postgraduate intentions were also expected to increase based on the assumption that the heightened demands of the transition would push more graduates to want to further their education (Blossfield et al., 2005). Again, this was disproved. No previous study that we know of has investigated change in postgraduate intentions over the course of the transition out of the university. However, Dietrich et al, (2012), who investigated broad achievement goals over the transition, found that the participants adjusted their goals over the transition to more attainable goals and this change was related to their initial levels of work-related stress. Other studies have found no change in postgraduate intentions even after interventions to encourage more postgraduate intentions (Jepsen & Neumann, 2010). In the present study, a number of factors may account for the lack of significant change. First, the high baseline levels of postgraduate

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intentions (at baseline, about 90% had postgraduate intentions and about 50% had postgraduate implementation intentions). Secondly, the second wave occurred at the beginning of the national service when the participants were likely still adjusting to their new circumstances, meaning very little effort to devote to making postgraduate plans. What is evident though from the open-ended comments is that even with the short experience so far, the national service influenced renewed determination for further education.

> "It (national service) has reinforced my decision to further my education. I have come to appreciate that there is a lot more to learn about but also my first degree is just a stepping stone to realizing my full potential and dream."

> "It (national service) has motivated me to further my education considering the benefits of the permanent employees."

> "I am determined to continue with postgraduate studies after service."

> "It (national service) have rekindled my desire to go for further studies after my National Service"

The mean level of expectancies and values for both domains also did not change. Studies generally report that expectancies and values do change over the course of transitions from different levels of education (Eccles et al., 1989). Dietrich et al., (2012) showed that goal importance and attainability declined over the course of the transition to work. Again, it is worth mentioning that participants exhibited high scores in expectancies and values in both domains (see table 4.1 for means and standard deviations) hence there was not much room for growth. Furthermore, the high stability of the study variables over the study period is reasoned to be due to the short period between waves (1 year), with the respondents still within the transition period. The studies that showed change in these motivational constructs spanned several years and waves. Most importantly, mean-level stability in the study constructs does not necessarily exclude individual level changes. For instance, individuals that started with high implementation plans may decrease across time whereas those starting with low levels may increase across time. This may result in high mean stability despite intraindividual change.

The same explanation may also apply to the low rank stability observed with regards to engagement coping. Respondents rankings on engagement coping may have changed over the

study period, with individuals who used more engaged strategies at baseline using less over time and vice-versa. Although this is plausible and worth looking into, intraidividual-level changes are not addressed in the present study due to restrictions in the data available. Disengagement coping also showed a decrease across waves in line with expectations. Similarly, Haase, (2007) also found a decrease in disengagement over the course of the transition to work. The life-span theory of control (Heckhausen et al., 2010) contends that under conditions of urgency, people tend to channel their resources in goal striving. The period immediately following graduation and starting the national service may be considered an instance of such "urgency". Typically, graduates are having new experiences and therefore step up their behavioral efforts aimed at navigating these new environments. They are then likely to avoid disengagement behaviors (Tomasik, Hardy, Haase & Heckhausen, 2008). Additionally, the national service presents a situation where, work-related uncertainties cannot be ignored and become more salient for ones actions. Hence, more to goal striving and less effort is committed to goal disengagement (Dietrich et al., 2012). Some of the respondent's comments reflect this renewed effort at goal striving in the face of their own inadequacies in the national service;

> "As I meet more people in my (national service), I realize the role of further education in advancing in any career path. I cannot overlook the influence of further education on income and position. I am therefore more than determined to further my education"

Another goal of longitudinal analysis was to predict change in postgraduate intentions. Residual change analysis reveals that none of the entered predictors including, residual scores in perceived work demands expectancies, subjective values and demographic controls were significant in predicting residual scores in postgraduate intentions. However, baseline scores in perceived social support significantly predicted residual change in postgraduate intentions. This means that the likelihood of individuals to change their postgraduate education plans seems to have nothing to do with their perceived work uncertainties, their success expectations nor their subjective values. The likelihood of the respondents to change their postgraduate education plans had to do with their perceived social support, albeit a small influence. Research on perceived social support generally supports its predictive influence on achievement outcomes (Kracke, 2002) and longitudinally perceived social support has influenced job search behavior outcomes (Song & Werbel, 2007). Mackinnon, (2012) in a cross-lagged panel analysis showed that a change in average relative standing in perceived social support predicted change in average

relative standing in academic achievement two years later. Again, these results highlight the previous assertion that the support of others is helpful in the career and education plans of the present respondents, which is plausible given the Ghanaian context. Indeed as indicated by some of the comments, support reasons are cited for further education decision;

> "Personally it would be unwise for me to further my education after my national service, I'd want to work a bit to be able to support my parents financially and help my younger siblings"

To sum up, at baseline, the relationship among perceived work demands, perceived social support, coping strategies, expectancies, values and implementation intentions were investigated. The results indicated support for the mediation relationship between perceived work uncertainties and postgraduate intentions through expectancies. Hence, social change-related work uncertainties affect primarily students' assessments of their own abilities and success expectations, which in turn, are key predictors of further education plans. The respondents also exhibited high success expectations in both domains and appraised both domains to be mutually important. Cost considerations turned out to be less important for their work and education considerations, which indicates that the students may have a more positive and idealistic outlook of their abilities and prospects in these domains.

The results also supported the moderating role of engagement and disengagement coping on the relationship between perceived work demands and expectancies. The results indicated that respondent's level of engagement coping influenced whether or not perceived work uncertainties negatively affected their expectations for further education. Also, respondents level of disengagement coping influenced whether or not perceived work uncertainties negatively affected their work related success expectancies. No support was found for the moderating role of perceived social support on the mediation relationship between work demands and postgraduate intentions through expectancies, values and costs. Perceived social support was however, a significant influence on respondent's expectancies in both domains and education domain values.

Across the study period, respondent's postgraduate intentions, perceptions of work uncertainties, expectancies and values in both domains remained largely stable on average. What did change was their level of disengagement coping which decreased over the period. Hence, the respondents used less avoidant coping strategies as predicted and consistent with previous

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studies. Further results showed that perceived social support at baseline was a significant predictor of residual change in postgraduate intentions. Therefore, respondents who perceived high social support at baseline were more likely to increase postgraduate education plans over the study period.

6.5 Limitations and future directions

Some limitations of the study should be noted. The first limitation pertains to the length of interval between the study waves (1 year). The interval between waves in longitudinal studies is argued to be an important component that ideally should correspond with the time that a causal variable needs to affect an outcome variable (Maxwell & Cole, 2007; Selig & Preacher, 2009). The present study was planned, and should have ideally been conducted, around the national service program. The program begins every year in September and ends in August, the following year. However, the actual timing was done for pragmatic reasons; first wave was in November, 2011 and the second wave in November, 2012. Therefore, instead of the second wave being at the end of the national service, it was conducted a few months after it started. That is to say, the full effect of the national service may not have been captured, and it is not certain whether this may have affected the longitudinal results. A natural extension of the present study would be a follow-up assessment beyond the national service. Future research should examine longer term career and education outcomes to determine whether they are predicted by career and education expectancies and intentions before the transition under the present conditions of labor market uncertainty and lack of opportunities. Although there have been longitudinal studies that have followed participants from school to work, through several years and waves, there are no such studies in a similar contexts like the present.

The second limitation has to do with dropout or low second wave response (only 26% of the first wave sample responded to the second wave). Dropout is one of the major methodological problems in longitudinal studies, as it can affect validity, generalizability, and result in less statistical power and increased variance of findings (Gustavson, von Soest, Karevold & Røysamb, 2012; de Leeuw, 2005). In the present case, the dropout is attributed to two broad reasons. The first was a failure to locate the respondents. This may have happened if they changed their email addresses/lost their passwords after the first wave or if the emailed study invitations went into their spam inbox. Respondent names were not requested for/provided due to

privacy concerns and in the absence of valid postal addresses, the email was the only viable option. A few respondents in this position were successfully tracked via their Skype addresses. The second reason for the dropout may have been the unwillingness of respondents to respond to the second wave. Despite best efforts, including pre-notifications, several reminders, and extension of the data collection period and the incentive of a lottery draw with an attractive price, responses for the second wave remained low. On the part of the respondents, it is speculated that the instability of the transition period, lack of consistent internet service, the long questionnaire or simply loss of interest in participating in a study due to having to answer the same questions again may have contributed to the nonresponse. Dropout is particularly crucial if participants who stay in a study differ from those who drop out. Therefore, the second wave non-respondents were compared to respondents on demographic indicators and on key study variables. No significant differences were found in all respects except that there was a slightly higher male proportion in the second wave respondents. For future studies, web-based data collection remains a viable option. This is especially true for the internet savvy youth population. A few recommendations, geared towards non-response, include keeping intervals between waves short, keeping questions brief and providing incentives/tokens for each participant if possible. Furthermore, other social media forms e.g. twitter, facebook, etc. can be explored to increase participation.

The third limitation has to do with the generalizability of the findings. The sample was recruited from the business administration and psychology departments of a Ghanaian university. As explanation, these two departments were chosen because they have the largest student's population in the university and also, students from these departments often belong simultaneously to other university departments. Still, this represents a rather restricted sample and the present study does not attempt to make generalizations about the present results to other students groups beyond the present sample. Nonetheless, the results may be relevant for similar populations in Ghana and other countries in the sub region due to similarities in the transitions. Future studies could look into replicating the relations among these constructs with more representative samples from similar populations in Ghana and West Africa. Other African youth populations, for instance, those making the transition from secondary school to work, could also be investigated with respect to their perceived uncertainties, achievement motivation and career goals.

The fourth limitation has to do with the design of the study. Although a longitudinal design was employed and the terms "influence" and "predict" are used often, the present study cannot, and does not, make causal references. Clearly, two-wave observations are an improvement over cross-sectional designs because they permit an estimation of the amount of across-time change. However, they are still limited in conveying information about the rate of change, the shape of presumed causal relationships, the individual growth curve and also restricted in the statistical analyses that can be applied (Allison, 1994; Cole & Maxell, 2003). Other possible interpretations of the results can still not be ruled out. Nevertheless, to assuage these shortcomings, the present study tests for reciprocal relationships in the longitudinal analyses and as much as possible, controls for other possible covariates where applicable. Also, for our purposes, a two-wave study was the functional option to investigate the research questions, which centered on the national service program and the transition out of the university. Although, as mentioned earlier, a follow-up investigating the career outcomes of the sample and whether these outcomes can be predicted by baseline factors would be interesting.

The final limitation is one that is faced by all studies that make use of self-report data which may be a threat to the validity of the results. In the present study, although this is a real concern, a few methodological and theoretical features were used to help mitigate the incidence of false reporting. One is the web-based second wave. The web-based study is considered to be more anonymous and less prone to false reporting since the participant responds at their own comfort without the presence of the investigator to influence responses. The second is the use of postgraduate education implementation intentions instead of mere postgraduate intentions as the outcome variable. The former asks in detail for the plans in place for the pursuit of postgraduate education and shows marked difference from simple intentions. This scale allows us to differentiate those who have a real intention and those without.

In addition to the potential research directions included with the limitations above, future research would do well to integrate perspectives from the fields of stress and coping and of motivation and development. In this regard, the Jena model and the expectancy-value model can be utilized as framework. This is in light of the successful usage in the present study, providing evidence of the functionality of these tools for this developmental level (graduate level) and for non-western contexts. The Jena model of social change and human development, in addition to the perceived work demands (used presently, and having more to do with negative consequences

of social change), includes positive aspects of social change as well. These items address for instance, the positive impact of new forms of media for the individuals learning and experiences. Since the current population is made up of youth, considered to be more pro-change, investigating these "positive demands" and their relations to various outcomes might be a worthy endeavor in this context. Furthermore, the current study examined the impact of perceived work uncertainties specifically on further education-related goals/intentions. It is unclear how these findings apply to other domains for instance, marriage/family and relationships. It is possible that these other categories of goals are more or less influenced by perceived uncertainties through different mechanisms. This could be addressed by future research

Finally, the expectancy-value theory by Eccles and colleagues (1983) was propounded to investigate gender differences in achievement-related decisions at lower levels of schooling. In the present study, although gender was assessed and controlled for, it was not the focus. Future studies could therefore look into gender dimensions at the tertiary level of education as well. Some issues worth considering are, gender differences in how marriage and family costs considerations influence postgraduate consideration taking cognizance of the representation of females in tertiary programs and the present context where traditional female roles are well emphasized.

6.6 Implications of the study

The results of the present study showed that under conditions of labor market-related uncertainties youth transitioning out of the university generally maintain an optimistic outlook on their goals and, on average, actively engage with their environment to negotiate their way out of the university. This optimism is reflected in the high education and work-related expectancies and values in the results. This finding is especially noteworthy considering the gloomy graduate unemployment statistics, labor market uncertainties and other well-documented political, economic and social problems associated with the African context. Although their optimism may be unrealistic, it may serve an important psychological function. Their belief that they will prevail in the pursuit of their goals allows them to proceed with confidence which is ultimately beneficial for their outcomes (Arnett, 2000). Youth-centered policies (from the government, university and notably the national service scheme) can take advantage of these positive attitudes by providing the right structures needed to influence positive future outcomes of the transition to work. One of these structures, from the results of the present study, seems to be the right support

network. Although the present study did not distinguish between support from peers, family or school, the results highlighted the benefits of participant's perception of the support of significant others in the pursuit of goals. Through the provision of the right support structures, the negative impact of uncertainties on outcomes can be reduced. Interventions can thus aim at providing students, and generally young adults, with social support very early on to help drive student's motivation and developmental goals. This support should include career/further education-related information on the changing nature and structure of educational and occupational structures (for instance, to constrain their expectations of life-long employment after leaving school)

The present study was conducted around the mandatory national service program. The results indicate that some of the service objectives, such as providing participants insight into the working world, are to an extent met. However, rather than provide the respondents with the urge and confidence in work, the effect seemed to be a strengthening of their determination for postgraduate education. The objectives of the national service scheme, which includes help deal with the problem of youth and graduate unemployment, may best be served by taking care to properly align the graduate's needs with industry, for instance by creating bridges between educational institutions and employers (Schoon, Gutman & Sabates, 2012). Also, by creating vital employment opportunities for graduates and helping place graduates in more permanent positions. The service scheme can further provide opportunities for graduates to build on their knowledge by acquiring more adaptive and relevant skills, for instance entrepreneurial skills, so that they can be more flexible in their options and choices. An alternative to the mandatory service might also be an internship program where participants can choose, and apply to organizations that are in line with their own preferred career paths.

The present study also revealed the overwhelming intentions of graduates to pursue postgraduate degrees. It has been argued that since colonial times, successive governments have instilled the idea into urban Ghanaians, and indeed many other Africans, that education is the prerequisite for individual social mobility and national development (Yamada, 2005). Many pursue education with the aspiration of future formal wage employment. However, with the consistent decrease in the market value of education certificates, many respond with the urge to acquire more education (Langevang, 2007). The primary reason expressed for postgraduate intentions, in the present study, was unemployment concerns after graduation. Graduates simply have nowhere to go and so end up back in school. This has been argued as a factor in

"credentialism" (Cote & Allahar, 1994). The authors further argue that many (western) societies produce more higher education graduates than their economies need and consequently, many of these graduates end up underemployed. As a developing economy, Ghana may not be in this position, but the current high graduate unemployment and underemployment figures means that graduate and postgraduate education merit further consideration. The current labor market is unable to absorb the large numbers of youth graduating yearly from the different levels of education. Concerted efforts by all stakeholders including, industry, schools and government is required to cater to the problem. The harm of youth unemployment and underemployment, especially in a volatile context, can be far reaching and extend for years to come.

6.7 Conclusion

Youth research from around the globe report increasing complexity associated with the transition to adulthood and to work. Young people in African contexts have received relatively little of this research attention and subsequently, little is known about their transitions to work. The present study investigated contextual and psychological concerns during the transition from university to work and in the process, attempted to address several gaps in the literature. First, at the theoretical level, this study successfully utilized the Jena model of social change and human development and the expectancy-values theory, merging theories and constructs, which have hitherto not been studied together, in a new context. The study thus provided independent empirical support for the theories and the relationships among the constructs.

This study also provided important insight into the education and career goals of Ghanaian tertiary students and their transition out of the university. This study showed that a diminished sense of work uncertainties and controllability influences the success beliefs that an individual has about future work and further education. This in turn affects intentions they have for postgraduate education and the plans they have in place. However, contrary to expectations, perception of work uncertainties was negatively albeit indirectly associated with planning for postgraduate education rather than positively. Work and further education subjective task values were associated, not only with achievement outcomes at the lower level of schooling as has been previously studied, but with postgraduate intentions of graduates. Furthermore, the effect of the diminished sense of labor market controllability on success expectancies is influenced by the level of engagement and disengagement that the individual employs to deal to stressful situations.

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Overall, the research presented here shed light on the role of contextual factors, perceived uncertainties and social support in career and academic persistence.

For the current sample/population, or any group of graduates for that matter, a successful transition is an important goal and will form the foundation for future stages of development and transitions. However, what constitutes the goal of a successful transition is different for different individuals. For most of the present sample, a postgraduate education was found to be the immediate goal which helps towards fulfilling the longer term goal of finding gainful and hopefully lifelong employment. They must first however navigate through the national service program. This, for some, may have a delaying effect on the achievement of work and education goals.

The present findings largely indicate that in spite of dire labor market conditions, new graduates entertain high expectations of succeeding with career and further education goals. It also appears that the graduates perceive postgraduate education and career advancement as opportunities to fulfill value needs. For these new graduates, further education contributes to their employability and higher lifetime earnings, in addition to other related social outcomes. The support of others was found to be important in their appraisals of their performance and how important these domains are to them.

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Appendix

Appendix A: Questionnaire

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a.   Sociodemographics: To begin with, we would like to ask you for a few personal details.

b.   Please state your date of birth, (month and year) and age in years.

month: _ _   year: 19 _ _

Age (years) _ _ _

c.   Gender

☐Male   ☐ Female

d.   Where were you born?

Country:_____

Region:_____

Town:_____

e.   Which department in the university are you currently registered with? If more than 1, state your main department first and then the others according to significance

1._____

2._____

e.   In which of the following categories is your cumulative grade point average (CGPA) so far?

☐ 0 - 1

☐ 1 - 2

☐ 2 – 3

☐ 3 – 4

☐ I am not sure

f.   Are you aiming to further your education after your national service?

☐Yes

☐No

☐I am not sure

---

2.   The following questions refer to further education activities undertaken <u>immediately after your national service</u>.

Please read each statement carefully and give an answer that best describes your <u>current</u> situation.

A   How likely is it that you will attend graduate school?

☐definitely will not attend (Go to section 3)

☐probably will not attend (Go to section 3)

☐not sure

☐probably will attend

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☐definitely will attend

g. Have you clearly decided when you will start graduate school?

☐not at all

☐rough idea of the time

☐committed to an exact time

h. If yes, please state the year and month you intend to start

Year _____

Month _____

i. Have you clearly decided which institution you want to attend for graduate school?

☐not at all

☐rough idea of the school/institution

☐committed to an exact institution

j. If yes, please state the name of the institution and the type of education/qualification

Name of institution _____

Type of qualification _____

k. Have you clearly decided <u>which subject</u> you intend to study for your graduate studies?

☐not at all

☐rough idea of the subject

☐committed to a study subject

l. If yes, please state which subject you intend to pursue

Study subject

_____

m. Do you know <u>how many years</u> of graduate school you need to achieve the postgraduate degree that you want?

☐not at all

☐rough idea of the years

☐committed to an exact number of years

n. If yes, how many years of further education do you need?

Number of years of graduate school

_____

o. Have you clearly established how you intend to <u>finance</u> graduate school?

☐not at all

☐rough idea of how to finance

☐committed to a finance plan

p. If yes, please state how you intend to finance your further education

_____

q. Have you <u>discussed</u> your further education goals with your family/significant others?

☐not at all

☐somewhat

☐discussed extensively with family/significant others

r. Do you intend to pursue your further education in Ghana or Abroad?

☐ In Ghana

☐ In another African country

☐☐☐ In Europe or America

☐ Undecided

s. Even if you are not sure about it, please imagine that you will definitely go to graduate school immediately after your national service. The following questions are about your expectations and values concerning postgraduate education.

Read each statement carefully and answer to which extent the statement reflects your <u>current</u> opinion best, using ratings between 1 and 7.

t. How well do you expect to perform if you were to continue into graduate school?

very poorly						very well
1	2	3	4	5	6	7

u. How confident do you feel to handle the challenges of graduate school after your national service?

not at all confident						very confident
1	2	3	4	5	6	7

v. How easily do you expect to attain the level of performance you desire in graduate school?

very difficult						very easily
1	2	3	4	5	6	7

w. How certain are you of success in graduate school after your national service?

very uncertain						very certain
1	2	3	4	5	6	7

x. How important to you is succeeding in graduate school?

not at all important						very important
1	2	3	4	5	6	7

y. How important is earning a postgraduate degree to you as an individual?

not at all important						very important
1	2	3	4	5	6	7

z. How important do you think a post graduate degree is for you to be able to fulfill your fullest potential?

not at all important						very important
1	2	3	4	5	6	7

aa. How important is further education

not at all   very

	after your service for the fulfillment of your long term career goals?	important					important	
		1	2	3	4	5	6	7
bb.	How necessary is postgraduate education for your future livelihood?	not at all necessary					very necessary	
		1	2	3	4	5	6	7
cc.	How important is furthering your education for your future work opportunities?	not at all important					very important	
		1	2	3	4	5	6	7
K	How attractive to you is the thought of furthering your education?	not at all attractive					very attractive	
		1	2	3	4	5	6	7
L	How much do you think you would enjoy going to graduate school?	not at all					very much	
		1	2	3	4	5	6	7
M	How interesting for you is the idea of further education?	not at all interesting					very interesting	
		1	2	3	4	5	6	7

4.   This section is about what you may have to give up in furthering your education after your national service.

		strongly disagree					strongly agree	
A	I'm concerned that going to graduate school will prevent me from being able to focus on other goals like marriage and building a family	1	2	3	4	5	6	7
dd.	I don't want to take time away from work by going to graduate school.	1	2	3	4	5	6	7
ee.	Getting a graduate degree sounds like it requires more effort than I'm willing to put into it.	1	2	3	4	5	6	7

ff.   I feel that going to graduate school after my national service will deprive me of other activities I want to pursue while I am still young.

    1   2   3   4   5   6   7

5.   Now please imagine that you will definitely work full time <u>immediately after your national service,</u> instead of furthering your education. The following questions are about your expectations and values concerning working life.

A	How well do you expect to perform if you were to start working full time after national service?	very poorly							very well
		1	2	3	4	5	6	7	
B	How confident do you feel to handle the challenges of working life after your national service?	not at all confident							very confident
		1	2	3	4	5	6	7	
C	How easily do you expect to attain the level of performance you desire in working life?	very difficult							very easily
		1	2	3	4	5	6	7	
D	How certain are you of success in working after your national service?	very uncertain							very certain
		1	2	3	4	5	6	7	
E	How important to you is succeeding in your working life?	not at all important							very important
		1	2	3	4	5	6	7	
gg.	How important is working after the service to you as an individual?	not at all important							very important
		1	2	3	4	5	6	7	
hh.	How important do you think working is for you to be able to fulfill your fullest potential?	not at all important							very important
		1	2	3	4	5	6	7	
ii.	How important is working after your service for the fulfillment of your long term career goals?	not at all important							very important
		1	2	3	4	5	6	7	
I	How necessary is working after your	not at all							very

	service for your future livelihood?	necessary					necessary		
		1	2	3	4	5	6	7	
J	How important is working after your service for your future work opportunities?	not at all important					very important		
		1	2	3	4	5	6	7	
K	How attractive to you is the thought of working after your service?	not at all attractive					very attractive		
		1	2	3	4	5	6	7	
L	How much do you think you would enjoy working after your service?	not at all					very much		
		1	2	3	4	5	6	7	
M	How interesting for you is the idea of working after your national service?	not at all interesting					very interesting		
		1	2	3	4	5	6	7	

6. This section is about what you have to give up in order to <u>work</u> after your national service.

		strongly disagree					strongly agree	
A	I'm concerned that working after my national service will prevent me from being able to focus on marriage and family as I would like to.	1	2	3	4	5	6	7
jj.	I don't want to take time away from graduate school by working right after my service.	1	2	3	4	5	6	7
kk.	Working after my national service sounds like it requires more effort than I am willing to put into it.	1	2	3	4	5	6	7
ll.	I feel that going into full-time work immediately after my service will take time away from other activities I want to pursue while I'm still young.	1	2	3	4	5	6	7

7. Please now consider education and work conditions in Ghana and in what ways things may have changed <u>over the past 4-5 years</u>. If the statement does not apply to your situation at all please mark number 1. If the statement fully applies to your situation please mark number 7. Using ratings between 1 and 7 you can grade your opinion accordingly.

a.	Would you say: when considering the past 4-5 years that in the country...	does not apply at all						fully applies
A	The bachelors' degree has become less valuable than it used to be.	1	2	3	4	5	6	7
B	My education doesn't adequately prepare me for work any longer.	1	2	3	4	5	6	7
C	It has become more difficult to plan my career path.	1	2	3	4	5	6	7
D	It is more likely today that I will be forced to work part-time instead of full-time at some time in the future.	1	2	3	4	5	6	7
E	My risk of not finding a job has increased.	1	2	3	4	5	6	7
F	My career plans are now more often hindered by unforeseen events and circumstances.	1	2	3	4	5	6	7
G	It is now more likely that I will later be forced to accept a job requiring lower qualifications than those I have.	1	2	3	4	5	6	7
H	There are currently fewer future job opportunities for me.	1	2	3	4	5	6	7

b. People handle such changes and challenges mentioned above in very different ways. With the help of the following list please consider how you would deal with such challenges.

If the statement does not apply to your situation at all please mark number 1. If the statement fully applies to your situation please mark number 7 please grade your opinion accordingly.

		does not apply at all						fully applies
A	I am also prepared to make a big effort in order to find a good	1	2	3	4	5	6	7

solution.

B	If I get stuck then I take advantage of all the help I can get to make headway.	1	2	3	4	5	6	7
C	I tell myself time and time again that I can manage it if I only set my mind to it.	1	2	3	4	5	6	7
D	If I can't find a solution then I put the problem to the back of my mind.	1	2	3	4	5	6	7
E	If I can't handle these changes then I search for grounds not to have to give myself the blame.	1	2	3	4	5	6	7
F	No trouble is too much for me in handling these changes as long as it's worth my while.	1	2	3	4	5	6	7
G	If I am not making any progress then I ask other people for ways and means of finding a solution.	1	2	3	4	5	6	7
H	If I can't find a solution then I search for explanations which enable me to justify myself in my own mind.	1	2	3	4	5	6	7
I	If nothing works out then I no longer take the whole thing so seriously.	1	2	3	4	5	6	7
J	I imagine over and over again how happy I will be when I find a good solution.	1	2	3	4	5	6	7
K	I don't hesitate long when it comes to finding a good solution but rather do something towards solving the problem.	1	2	3	4	5	6	7
L	If I get stuck then I weigh up who I could ask for help.	1	2	3	4	5	6	7
M	In order to make progress I avoid anything which could distract my attention.	1	2	3	4	5	6	7
N	If I don't manage to find a good solution whatsoever then I search for plausible reasons why I am not at	1	2	3	4	5	6	7

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fault.

O	If I can't handle these changes at all then I don't concern myself with them any longer.	1	2	3	4	5	6	7

c. Next, we would like to find out about your social environment and the people with whom you interact. To what extent do the following statements apply to you?

"1" corresponds to "does not apply at all"; "7" to "fully applies". Using ratings between 1 and 7 you can grade your opinion accordingly.

		does not apply at all						fully applies
A	There are people who truly like me.	1	2	3	4	5	6	7
B	I know some people whom I can always rely on.	1	2	3	4	5	6	7
C	I belong to a club, church fellowship or other initiative where I can make a contribution or where I am needed.	1	2	3	4	5	6	7
D	Whenever I am sad, there are people who cheer me up.	1	2	3	4	5	6	7
E	When I am worried, there is someone who helps me.	1	2	3	4	5	6	7
F	Whenever I am not feeling well, other people show me that they are fond of me.	1	2	3	4	5	6	7
G	There is someone in my club, church fellowship or the initiative in which I am actively involved who is a shining example to me.	1	2	3	4	5	6	7
H	There is always someone there for me when I need comforting.	1	2	3	4	5	6	7
I	There are people who offer me help when I need it.	1	2	3	4	5	6	7
J	When everything becomes too much for me to handle, others are there to help me.	1	2	3	4	5	6	7

d. To what extent do the following statements apply to you? Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

		strongly disagree						strongly agree
A	In most ways my life is close to my ideal.	1	2	3	4	5	6	7
B	The conditions of my life are excellent	1	2	3	4	5	6	7
C	I am satisfied with my life.	1	2	3	4	5	6	7
D	So far I have gotten the important things I want in life.	1	2	3	4	5	6	7
E	If I could live my life over, I would change almost nothing.	1	2	3	4	5	6	7

11. The following are a series of goals which people possibly aim to reach and fulfill in their lives. For each one, please indicate, on a scale of 1 to 7, how important it is to you that you reach this goal within your lifetime. "1" corresponds to "not important" and "7" to "very important".

		not important					very important		
A	Have a high social status	1	2	3	4	5	6	7	☐
B	Develop my skills	1	2	3	4	5	6	7	☐
C	Receive affection and love	1	2	3	4	5	6	7	☐
D	Have a large circle of acquaintances	1	2	3	4	5	6	7	☐
E	Live a life of adventure	1	2	3	4	5	6	7	☐
F	Have a secure income	1	2	3	4	5	6	7	☐

12. Now some more questions about your living situation

A What is your marital status?   ☐ Single
                                    ☐ Married

		Other (please specify)		

_____

B	Do you have any children of your own?	☐ Yes ☐ No

If yes, how many do you have in total? _____

C	What is the highest educational level attained by your parents?	Father	Mother
	Doctorate	☐	☐
	Masters degree	☐	☐
	Bachelors degree	☐	☐
	Polytechnic(diploma/HND)	☐	☐
	Technical school	☐	☐
	Senior high school	☐	☐
	Junior high school	☐	☐
	Primary school	☐	☐
	No school	☐	☐
	Not sure	☐	☐
	Other (Please state)	_____	_____

D	Please indicate the appropriate group for your Mother's and Father's occupation. If they no longer work (or are retired), then indicate the last occupation they held.	Father	Mother
	Unskilled manual workers e.g. Day labourer, janitor, house cleaner, farm worker	☐	☐
	Semi-skilled manual worker 1 e.g. taxi driver, assembly line workers, masons, baggage porter.	☐	☐
	Semi-skilled manual worker 2 e.g. Painter, trade, sales clerk, truck driver, cook, sales counter or general office clerk.	☐	☐
	Skilled worker e.g. Musician, bookkeeper, secretary, insurance sales.	☐	☐
	Service class 1 e.g. Supervisor, librarian, artist and artisan, electrician, administrator, military enlisted personnel.	☐	☐
	Service class 2 e.g. Nurse, medical technician, counselor, manager, police and fire personnel, financial manager, therapist.	☐	☐
	Lower grade professionals e.g. Mechanical, nuclear, and	☐	☐

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electrical engineer, educational administrator, veterinarian, military officer

Higher grade professionals e.g. Physician, attorney, professor, chemical and aerospace engineer, judge, senior manager ☐ ☐

Other (please state) _____ _____

E | Do your parents own their place of residence? | ☐ Yes, they own their place of residence |
	☐ No, they rent their place of residence
	☐ Other (Please state)
	_____

F | Have you ever worked at a job or a business excluding household work? | ☐ No ☐ Yes |

If yes, what kind of work was this? _____

G | What is your <u>main</u> source of financial support? | ☐ Myself |
	☐ Spouse/partner
	☐ Parents
	☐ Other (Please state)_____

H | How much financial support have you received on average each month from the source above? | ☐ less than 50 GH₵ |
	☐ 50 and 100 GH₵
	☐ 100 and 150 GH₵
	☐ Above 150 GH₵

Finally, are there any comments you would like to make about your work/education plans that have not been mentioned in the questionnaire?

_____

_____

_____

Thank you for taking the time to support this research.

The questionnaire you have just completed is part of a 2 wave study aimed at assessing change in attitudes towards post-graduate education across the national service period.

We would be most grateful for your support by taking part in the second wave of the study which will be sent via mail.

Your participation will help the researchers understand better what motivates youth such as yourself to decide to further their education.

As an incentive to encourage participation in the second survey, a lottery draw will be held using ID numbers with a chance for two participants to win 200 Euro worth Amazon gift cards.

Can we count on your participation in the second wave of the study?

Your email address; _____

Note: your email address is solely for the purpose of sending you the follow-up questionnaire. It would not be used for any other purpose and will be deleted immediately after you respond with the completed questionnaire and the draw is completed.

In order for us to tie your responses across waves together and still ensure anonymity, we would like you to create your own, easy to remember code below;

CODE:

F if you are female	The first 2 letters of your month of birth	The last 2 numbers of your year of birth	The first 2 letters of your first name	The first 2 letters of your hometown
M if you are male				
	e.g., JA if you were	e.g., 73 if	e.g., Ko if your name	e.g., Ku if

Thank you for your time and patience.

Table C.1 Correlations between study variables at wave 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Age (1)																
Gender (2)	-.112*															
SES(3)	-.156**	.189**														
Subject (4)	-.133**	-.062	.040													
CGPA 5)	-.088	.019	-.096	.188**												
Work demands (6)	-.041	-.113*	-.058	-.001	-.064											
Intentions (7)	.042	.007	.089	-.015	.113*	-.055										
Social support (8)	.022	.154**	.003	-.099*	.050	-.032	.173**									
Engagement (9)	.040	.097*	-.090*	-.119**	.071	.140**	.107*	.259**								
Disengagement (10)	.118**	-.023	-.066	-.038	.001	.174**	-.092*	.026	.175**							
Education domain																
Exp. (11)	-.037	.065	-.072	.004	.114*	-.136**	.280**	.268**	.238**	.021						
Value (12)	.072	.070	.019	-.035	.132*	.090*	.343**	.225**	.287**	.119**	.420**					
Costs (13)	.047	-.117**	-.029	.095*	-.018	.161**	-.125**	-.013	-.128**	.129**	-.135**	-.141**				
Work domain																
Exp. (14)	.125**	.018	-.140**	-.045	.093	-.164**	.056	.180**	.256**	.105*	.397**	.143**	.028			
Value (15)	.120**	.114*	-.106*	.017	.013	-.026	-.161**	.102*	.232**	.222**	.123**	.167**	.117**	.458**		
Costs (16)	.046	-.081	.035	.048	-.028	.186**	.061	.016	-.011	.112*	-.032	.033	.366**	-.123**	-.241**	

Table C.2 Correlations between study variables at wave 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Age (1)																
Gender (2)	-.112*															
SES(3)	-.156**	.189**														
Subject (4)	-.133**	-.062	.040													
CGPA 5)	-.088	.019	-.096	.188**												
Work demands (6)	.033	-.051	.010	-.020	.281*											
Intentions (7)	.010	.020	.067	-.150	.021	-.009										
Social support (8)	-.050	-.119	-.032	.152	-.071	.091	.133									
Engagement (9)	.049	-.150	-.062	.110	.060	.151	.000	.511**								
Disengagement (10)	.083	-.060	-.185	.068	-.031	.267**	-.003	.258**	.219*							
Education domain																
Exp. (11)	.039	.027	-.078	-.104	-.179	-.255**	.114	.110	.181	-.114						
Value (12)	-.075	-.009	.108	-.030	-.051	-.023	.159	.017	.170	-.157	.422**					
Costs (13)	.065	-.119	.070	.081	-.003	.162	-.096	.061	-.028	.202*	-.360**	-.319**				
Work domain																
Exp. (14)	.051	-.081	-.116	-.040	-.197	-.348**	-.079	-.034	.079	-.036	.384**	.119	-.099			
Value (15)	.096	-.152	-.034	.157	-.007	-.123	-.327**	-.183	.031	-.035	-.031	-.097	.079	.469**		
Costs (16)	.005	.077	.035	.031	-.049	.226*	.336**	.142	.010	.084	-.167	-.121	.301**	-.342**	-.391**	

Zusammenfassung

(summary)

Perceived work uncertainties and expectancy-value as predictors of postgraduate intentions in the transition to work among Ghanaian graduates.

Arguably, the labour markets effects of globalised socioeconomic change has had the most impact on the youth especially those transitioning out of education to work. It is deemed that these transitions have become more protracted and uncertain with one of the effects being longer stay in education. Consequently, there has been a lot of research interest in youth work transitions. However, these researches have largely side-stepped sub Saharan Africa youth and so, very little is known about their transitions. The present study sought to help address this gap and investigate whether these macro level trends influenced postgraduate intentions and plans.

As a theoretical framework to guide the study, the Jena model of social change and human development, which assesses individual level effects of societal change, was merged with the expectancy-value model, which assesses the antecedents to achievement-related outcomes. These models were merged with the reasoning that social change related factors would serve as a more distal influence on postgraduate intentions and would likely act through the more proximal achievement-related factors, expectancies and subjective values. The Jena model also highlights the role of the individuals coping and social support resources in influencing psychological outcomes.

Cross-sectional and longitudinal questions were posed. It was hypothesized that perceived work demands, which is the perception of growing work-related uncertainties would directly and positively influence the intentions and plans to pursue postgraduate education and also indirectly through the individuals work and education expectations and values. In addition, it was expected that engagement coping, disengagement coping and perceived social support would moderate the mediation relationship between perceived work demands and expectancies and values. Longitudinally, mean-level changes were expected in all the study variables as a result of the transition. Increases were expected in perceived work demands, postgraduate intentions,

engagement coping, education domain expectancies and values and work domain costs values with decreases in disengagement coping, work domain expectancies and values and education domain costs. Moreover, change in perceived work demands was expected to be related to change in postgraduate intentions.

To investigate these hypotheses, a two-wave study was conducted among final year tertiary students (N=504 at first wave) in a public university in Accra, Ghana. The participants were assessed on established measures of the above variables with slight adaptations to enable them fit in the context. Two pilot studies were conducted to determine the suitability of the measures and amended accordingly before the main studies. The first wave of the main data collection comprised a paper-pencil format and the second wave was web-based. The reason was pragmatic; at second wave, the students were out of the university and they could feasibly be contacted through electronic mail which was used to invite them for the second wave.

Results indicated, first and foremost, support for the mediation relationship between perceived work uncertainties and postgraduate intentions through expectancies but not subjective values. There was also support for the moderating role of engagement and disengagement coping on the relationship between perceived work demands and expectancies. Perceived work uncertainties had a more negative impact on the further education expectations among those who used less engagement coping strategies. Similarly, among those who used less disengagement coping strategies, perceived work uncertainties had a more negative impact on the work expectations. No support was found for the moderating role of perceived social support on the mediation relationship between work demands and postgraduate intentions through expectancies, values and costs. However, perceived social support was a significant influence on respondent's expectancies in both domains and education domain values. Longitudinal results showed that, respondent's postgraduate intentions, perceptions of work uncertainties, expectancies and values in both domains remained largely stable on average. What did change was their level of disengagement coping which decreased over the period. Hence, the respondents used less avoidant coping strategies which was in line with the study expectations and previous studies. Further results showed that perceived social support at baseline was a significant predictor of residual change in postgraduate intentions. Therefore, respondents who perceived high social

support at baseline were more likely to increase postgraduate education plans over the study period.

Limitations of the research include the timing of the research which, although pragmatic, may not have matched the causal timing of the transition and may have influenced the results. Also, the high drop-out between waves may have the affected analysis and longitudinal results. Other limitations have to do with the restricted sample which influences the generalizability of study findings as well as the inability to make causal inferences. Recommendations include the research utility of a longer term study to investigate long term outcomes.

In sum, findings largely indicate that, in spite of dire labor market conditions, new graduates entertain high expectations of succeeding with career and further education goals. It also appears that the graduates perceive postgraduate education and career advancement as opportunities to fulfill value needs. For these new graduates, further education contributes to their employability and higher lifetime earnings, in addition to other related social outcomes. The support of others was found to be beneficial in their performance appraisals, the importance of these domains and in the postgraduate plans. Implications of the study focused on amending the role of the national service to better serve the needs of graduates and industry and addressing issues of youth unemployment and underemployment by all stakeholders.

Ehrenwörtliche Erklärung

(Certification of Authorship)

Hiermit erkläre ich,

1. dass mir die geltende Promotionsordnung bekannt ist;
2. dass ich die Dissertation selbst angefertigt, keine Textabschnitte eines Dritten oder eigener Prüfungsarbeiten ohne Kennzeichnung übernommen und alle von mir benutzten Hilfsmittel, persönlichen Mitteilungen und Quellen in meiner Arbeit angegeben habe;
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Jena, den 18. März 2013