Professional Skills and Abilities Growth Mindset as a Predictor of Career Adaptability: The Moderating Role of Perceived Rewards

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Abstract

The goal of this study was to investigate the relationships between employees' professional skills and abilities growth mindset, their perceived intrinsic and extrinsic rewards, and career adaptability. Based on the self-determination theory, I hypothesized that the positive relationship between a professional skills and abilities growth mindset and career adaptability is stronger when employees believe they are receiving rewards from their work. Data from 221 participants were collected using an online questionnaire as part of a larger study. Results from hierarchical regression analyses showed that a professional skills and abilities growth mindset and perceived intrinsic rewards were positively related to career adaptability. Perceived intrinsic and extrinsic rewards did not moderate the relationship between a professional skills and abilities growth mindset and career adaptability. This research adds to the existing growth mindset literature and has implications for practitioners who want to prepare their employees for career changes.

Keywords: growth mindset, professional skills and abilities, career adaptability, perceived rewards, intrinsic, extrinsic

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Nowadays individuals are constantly faced with a changing work environment. This results from organizational restructuring, technology that is improving, globalization and employment contracts becoming more flexible (Haenggli & Hirschi, 2020; Schmitt & Scheibe, 2022). Employees' ability to adapt to this constantly changing work environment has therefore become more desirable. Career adaptability has been noted as a necessary resource for successful career development (Johnston, 2018). The concept of career adaptability is embedded in the career construction theory and captures individuals' level of preparedness to cope with and adapt to career changes (Savickas, 1997, Savickas 2005). According to the career construction theory (Savickas 2005), employees high in career adaptability are more likely to engage in career-related activities than employees low in career adaptability. But how can this effect be explained?

Schmitt and Scheibe (2022) argued that individuals' professional skills and abilities mindset can function as a predictor of career adaptability. Career adaptability refers to the willingness (or readiness) to adapt to changes in individuals' careers. Schmitt and Scheibe (2022) based their argument on the mindset framework (Dweck & Leggett, 1988), which posits that individuals can differ in their beliefs about whether certain personal characteristics are malleable (growth mindset) or are uncontrollable and more difficult to change (fixed mindset). In this paper, the focus will be on the growth mindset. People with a growth mindset believe that skills and abilities are flexible and can be developed. Therefore, they should be more willing to take actions that enhance their career development. Schmitt and Scheibe (2022) did also find that a professional skills and abilities growth mindset predicted career adaptability.

The first goal of the current study is to replicate these findings of a positive relationship between a professional skills and abilities growth mindset and employees' career adaptability. Secondly, I want to extend existing research by considering additional variables that could influence the relationship between a professional skills and abilities growth mindset and career adaptability. I argue that employees' perceived rewards moderate this effect. These rewards can be defined as rewards employees feel they are getting from their work (Maurer et al., 2003). In the current study two types of rewards are distinguished: (1) perceived intrinsic rewards, such as enjoyment in one's work, reaching one's potential, or having interesting work, and (2) perceived extrinsic rewards, such as higher salary. Because of the similarities these types of rewards share with intrinsic and extrinsic motivation, the self-determination theory (SDT; Deci & Ryan, 1985) is used to explain the effects. Specifically, I argue that the positive relationship between a professional skills and abilities growth mindset and career adaptability is stronger when employees believe they are receiving rewards from their work (see Figure 1). By replicating Schmitt and Scheibe's (2022) findings, this research will add to the validation of their 6-item *professional skills and abilities mindset* scale. Furthermore, this study will add to the increasing research on the role of growth mindset beliefs in the professional setting (Murphy & Reeves, 2019), by examining how perceived rewards play a role in this. Finally, the findings of this study have important implications for practitioners who want to help their employees in preparing them for career changes.

Mindset Theory and the Professional Skills and Abilities Growth Mindset

The mindset theory (Dweck, 1999; Dweck & Leggett, 1988) holds that people can differ in their beliefs about the fixedness or malleability of certain skills, abilities and traits. A fixed mindset refers to the view that these skills and abilities lie within the person and cannot be developed, while a growth mindset refers to the view that these attributes can be changed and cultivated (Yeager & Dweck, 2020). The latter has been linked to being more likely to

thrive and continue to improve when facing setbacks or difficulties (Dweck et al., 2014; Dweck & Yeager, 2019). People who adopt more growth mindset beliefs show resilience and see challenges as learning opportunities, which makes them less likely to withdraw in the presence of setbacks (Nussbaum & Dweck, 2008).

In this research paper, the growth mindset will be applied to the organizational context, specifically to the domain of professional skills and abilities. Hereby *skills* relate to procedural knowledge, like problem-solving, technical and social skills (Schmitt & Scheibe, 2022). *Abilities* are more general individual capacities that can help develop proficiency in multiple tasks, like multi-tasking, spatial orientation and verbal or mechanical aptitude. According to these definitions a professional skills and abilities growth mindset can be defined as "an individual's belief that work-related skills and abilities can be actively influenced or changed through effort, motivation, or support throughout one's career" (Schmitt & Scheibe, 2022, p. 2). This same definition will also be used in the current study.

Professional Skills and Abilities Growth Mindset and Career Adaptability

Previous literature on the role of people's mindsets in the work context has shown that a growth mindset is related to various organizational outcomes, like performance, persistence, resilience, leadership and workplace engagement (Caniëls et al., 2018; Han & Stieha, 2020; Murphy & Reeves, 2019; Nussbaum & Dweck, 2008).

In this study, the relationship between a professional skills and abilities growth mindsets will be examined. The concept of career adaptability is one of the central components of the career construction theory, which posits that individuals differ in their levels of readiness to adapt to or cope with career changes (Savickas, 1997, Savickas 2005). The career construction theory asserts that careers do not unfold but are constructed through individuals' meaning on their vocational behavior and occupational experiences. Career adaptability has been noted as an important psychological resource for developing one's

career (Johnston, 2018). It has also been associated with several positive work outcomes, such as career success, well-being, employability and performance (Maggiori et al., 2013; Rudolph et al., 2017; Spurk, et al., 2016; Zacher, 2015). For example, in their study on work conditions, career adaptability, and well-being among employed and unemployed adults in Switzerland, Maggiori et al. (2013) found that career adaptability was positively associated with professional and general well-being. Zacher (2015) did two diary studies that showed that career adaptability positively predicted both daily performance and job satisfaction. Rudolph et al. (2017) noted core self-evaluations, proactive personality and cognitive ability as indicators of adaptiveness. This adaptiveness refers to psychological characteristics that reflect individuals' readiness and willingness to adjust to changes in their careers. People differ in their adaptive readiness which predicts the availability of adaptability resources. Schmitt and Scheibe (2022) added a professional skills and abilities mindset to the list of indicators of adaptiveness. They found that a professional skills and abilities growth mindset predicted career adaptability. Accordingly, my first hypothesis is:

> **Hypothesis 1.** A professional skills and ability growth mindset is positively related to career adaptability.

Intrinsic and Extrinsic Rewards in the Workplace and the Self-Determination Theory

The self-determination theory (Deci & Ryan, 1985) is a theory of human motivation and posits that behavior is driven by differences in the levels of self-determined motivation. The two forms of motivation that are often distinguished are intrinsic and extrinsic motivation. *Intrinsic motivation* refers to the motivation that comes from doing something for the sake of it, out of enjoyment or inherent interest (Deci & Ryan, 2000). *Extrinsic motivation* refers to the motivation that comes from doing something to obtain a separable outcome, like monetary rewards or avoiding punishment. Individuals who have higher self-determined motivation will be more likely to direct their actions or behaviors towards their goals.

Research shows that intrinsic and extrinsic motivation are closely related to performance and satisfaction in the workplace (Gagné & Deci, 2005), and work attitudes (Fernet et al., 2004). For example, intrinsic motivation has been associated with several workplace outcomes, like work motivation (Fernet et al., 2010), work satisfaction (Richer et al., 2002) and performance (Foss et al., 2009). Furthermore, Cerasoli et al. (2014) showed that intrinsic motivation was a strong predictor of quality of performance, whereas extrinsic motivation was a stronger predictor of quantity of performance.

In the light of the self-determination theory, I will examine employees' perceived intrinsic and extrinsic rewards in the present study. *Intrinsic rewards,* on the one hand, are rewards that arise within the individual from the work itself. This can be enjoyment in one's work, reaching one's potential or having interesting work (Maurer et al., 2003). *Extrinsic rewards,* on the other hand, are tangible outcomes like better pay or promotions.

Both intrinsic and extrinsic motivation have been studied in relation to career adaptability. Intrinsic motivation has been associated with higher levels of career adaptability in several studies (Hirschi, 2010; Pouyaud et al., 2012; Shin & Kelly, 2013). Furthermore, Haenggli and Hirschi (2020) found that career adaptability was positively related to meaningful work and Ye (2015) found that intrinsic work values (values that are nonmaterial and inherent in work activities) were related to higher levels of career adaptability. Besides that, intrinsically motivated people are more likely to see uncertainty or risks as a challenge instead of a threat (Shin & Lee, 2017). For extrinsic motivation, the findings are more contradictory. On the one hand Haenggli and Hirschi (2020), for example, found that career adaptability is not related to or even negatively related to salary. On the other hand, Guan et al. (2015) found a positive relation between salary and career adaptability, and Ye (2015) found that extrinsic work values were positively related to career adaptability as well.

Hypothesis 2. Intrinsic rewards are positively related to career adaptability.

Research Question 1. What is the relationship between extrinsic rewards and career adaptability?

The Moderating Role of Intrinsic and Extrinsic Rewards

Research on intrinsic and extrinsic motivation in the workplace has shown that motivation plays an important role in predicting career behavior (Gagne & Deci, 2005). Intrinsic motivation has been noted to be positively related to career outcomes, such as affective commitment, performance, work effort and personal initiative (Dysvik & Kuvaas, 2013; Gagne et al., 2015). In their meta-analysis on the self-determination theory, Van den Broeck et al., (2021) noted intrinsic motivation as the most important motivation in predicting employee well-being, attitudes and behavior. Furthermore, it has been noted as a strengthening factor between job resources and indicators of work performance (e.g., Dysvik & Kuvaas, 2008, 2011; Kuvaas, 2006). For example, Dyvik and Kuvaas (2011) found that the relationship between job autonomy and work performance was moderated by intrinsic motivation. Extrinsic motivation (in the form of tangible rewards) has also been shown to be positively associated with work performance and feeling competent (e.g., Cerasoli et al, 2014; Thibault-Landry et al., 2016; Young et al., 2012). Liang et al. (2018) found that extrinsic motivation strengthened the relationship between engagement and task effort. I argue that people who have a growth mindset and think that individuals' skills and abilities can be developed should be more motivated to take responsibility for their own careers when they perceive rewards to be intrinsic. Because they perceive their jobs to be interesting and enjoyable, they will be more actively engaged in career-related behavior. On the same note, employees who perceive rewards as extrinsic will also be more eager to invest in their careers. When these individuals have a growth mindset, they will put effort in developing career-related skills and abilities, because they want to attain better job outcomes, like a higher salary (Deci & Ryan, 2000). Accordingly, the combination of a professional skills and abilities

growth mindset, and perceived intrinsic or extrinsic rewards should be an especially strong predictor of career adaptability.

Hypothesis 3a. The positive relationship between a professional skills and abilities growth mindset and career adaptability is stronger when employees perceive rewards in their work as being intrinsic.

Hypothesis 3b. The positive relationship between a professional skills and abilities growth mindset and career adaptability is stronger when employees perceive rewards in their work as being extrinsic.

Method

Participants

A sample of full-time and part-time employees was invited to participate in this study. Of the 247 participants who completed the questionnaire, 24 participants got excluded because they failed the attention check item and two got excluded due to their monotonic response pattern, leaving a final sample of 221 participants (63.3% female; mean age = 31.0 years, *SD* = 10.4). Most participants stated that they were living in Germany (38.9%). The majority of the participants had achieved a university degree (68.8%) and were employed in different business sectors, such as financial industry, production, communication and marketing, health and social welfare, and administration.

Procedure and Research Design

The participant sample consisted of a combined group of participants, recruited by different Master students from the Rijksuniversiteit Groningen. The participants were recruited both in person and through social media such as Facebook, LinkedIn and Instagram. When the results were in, the participants were debriefed through a feedback report, which they received per email. Participation was voluntary and there was no financial compensation. The participants were asked to fill in two online questionnaires, with a time lag of four weeks

between the waves. However, in the current research, I will only refer to the data of the first wave. The questionnaires, set up in Qualtrics, were constructed by Schmitt and Scheibe (2022) and based on validated scales to measure the variables of interest. Before the first questionnaire started the participants filled in the informed consent. The first questionnaire assessed some demographic variables, as well as the concepts of a professional skill mindset and career adaptability. Furthermore, the participants were asked about intrinsic/extrinsic rewards. The second questionnaire contained same questions as the first, except for the demographics and the questions about intrinsic/extrinsic rewards. The questionnaires could be accessed through an online link on a pc, laptop, tablet or smartphone, and was available in both English and German. The first questionnaire took around 12 minutes to complete and the second one around 9 minutes. The study was conducted in the first quarter of 2023 and was approved by the ethics committee of the Department of Psychology at the University of Groningen.

Measures

Current research was part of a larger study. In this research I did not include all variables from the online questionnaire. I focused on the variables that were relevant to test my hypotheses.

Career adaptability was measured with the 12-item Career Adapt-Abilities Scale-Short Form (CAAS-SF) (Maggiori et al., 2017). Firstly, participants read the following statement: “Different people use different strengths to build their careers. No one is good at everything, each of us emphasizes some strengths more than others.” Secondly, they were asked to rate how strongly they have development certain abilities that refer to the four dimension of career adaptability: concern, control, curiosity and confidence. Participants responded to each item using a 5-point scale ranging from 1 (*not strong*) to 5 (*strongest*).

Each of these dimensions was assessed by three items. The Cronbach's α for this scale was .82.

Professional skills and abilities growth mindset was measured using three items from the Professional Skills and Abilities Mindset Scale by Schmitt and Scheibe (2022). An example item is "No matter what job people hold, they can always change their professional skills and abilities." Participants rated the items on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's α was .67.

Perceived intrinsic and extrinsic rewards were measured using the 11-item scale by Maurer et al. (2003). Intrinsic rewards are measured by eight items, for example: "If I participate in work-relevant learning activities, my work would likely be more interesting as a result." Extrinsic rewards are measured by three items, for example: "Participation in learning activities will help me get promotions into higher level jobs with better pay and rewards." Participants rated the items on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's α was .75 for the eight-item intrinsic rewards scale and .76 for the three-item extrinsic rewards scale.

Results

Preliminary Analysis

In this research I conducted two hierarchical regression analyses. Before performing these analyses, I checked whether the corresponding assumptions were met: the assumption of linearity, the assumption of homoscedasticity, the assumption of normality and the assumption of independent errors were all met (see Appendix).

Table 1 shows that – as expected – the independent variable (professional skills and abilities growth mindset) was positively related to the dependent variable (career adaptability). The same table also shows that all variables were positively correlated.

Hypotheses Testing

I tested my hypotheses and research question using two hierarchical regression analyses. Both analyses started by adding professional skills and abilities growth mindset and moderator perceived rewards (respectively intrinsic rewards and extrinsic rewards) to the model (Step 1), and subsequently their interactions (Step 2). Career adaptability was the dependent variable in both cases. For the sake of interpretation of the variables, I centered the predictors before including them in the model (Wuensch, 2017). Then I multiplied these centered variables to create the interaction effects, so that those were based on the centered scores as well.

First, I used the model with perceived intrinsic rewards as moderator variable to assess Hypothesis 1, 2 and 3a. Hypothesis 1 stated that a professional skills and abilities growth mindset predicts career adaptability. In line with this hypothesis, a professional skills and abilities growth mindset explained a significant part of the variance in career adaptability (see Table 2). Intrinsic rewards were also positively related to career adaptability (see Table 2). Thus, Hypothesis 2 is supported as well. Hypothesis 3a stated that the positive relationship between a professional skills and abilities growth mindset and career adaptability is moderated by perceived intrinsic rewards. There was no significant interaction effect (see Table 2). Thus, Hypothesis 3a was not supported.

To test Research Question 1 and Hypothesis 3b, the same model was used, but this time I used perceived extrinsic rewards instead of intrinsic rewards as moderator variable. I did not find a significant effect from perceived extrinsic rewards on career adaptability (see Table 3). On top of that there also was no significant interaction effect (see Table 3), meaning that Hypothesis 3b was not supported.

Discussion

The current study was conducted in the light of the increasing popularity of the growth mindset concept in understanding individuals' career behaviors and the increasing importance

of being able to adapt rapidly to changing work environments (Schmitt & Scheibe, 2022). The aim of the study was investigating the relationship between employees' professional skills and abilities growth mindset and career adaptability, and the moderating roles of perceived intrinsic and extrinsic rewards. The results of the hierarchical regression analyses give valuable insights into how these variables are related.

In line with the expectations, I found that a professional skills and abilities growth mindset, as well as perceived intrinsic rewards, positively predicted career adaptability. Employees who believe they can actively change their professional skills and abilities seem to be more prepared for unexpected changes in their careers. Additionally, individuals who perceive intrinsic rewards in their work, such as enjoyment, also seem to display higher levels of readiness to adapt to career changes. These findings align with previous research regarding the importance of a growth mindset and intrinsic motivation in organizational outcomes (e.g., Dysvik & Kuvaas, 2013; Gagne et al., 2015; Han & Stieha, 2020; Murphy & Reeves, 2019) and their relationship with career adaptability (e.g., Schmitt & Scheibe, 2022; Shin, 2012).

However, in contrast with the expectations, there were no significant interaction effects for both perceived intrinsic and extrinsic rewards. This suggests that the relationship between a professional skills and abilities growth mindset is not influenced by these rewards. The findings also suggest that, even though a professional skills and abilities growth mindset and intrinsic rewards are important factors for predicting career adaptability, they might work separately rather than together. A reason for not finding significant interactions could be due to the significant intercorrelations between the independent variable professional skills and abilities growth mindset, and the moderators perceived intrinsic rewards and perceived extrinsic rewards (see Table 1). It could be possible that perceived rewards do not significantly predict more variance in career adaptability over a professional skills and abilities growth mindset, because they overlap. Finally, I did not find a direct relationship

between perceived extrinsic rewards and career adaptability, which is line with previous research on this topic (e.g., Haenggli & Hirschi, 2020).

Implications

This study adds to the growing body of research on mindsets in the organizational domain (Murphy & Reeves, 2019). It also contributes to the validation of the newly developed 6-item professional skills and abilities mindset scale (Schmitt & Scheibe, 2022), by replicating the positive relationship between a professional skills and abilities growth mindset and career adaptability. Even though perceived rewards did not moderate the expected relationship, this still is a valuable finding because it shows the independent effects of a professional skills and abilities growth mindset and perceived intrinsic rewards on career adaptability.

These findings also have important implications for practitioners who like to prepare their employees for changes in their careers, because these highlight the importance of intrinsic rewards and facilitating a growth mindset to enhance employees' career adaptability. Organizations can support their workers by, for example, designing interventions to enhance individuals' growth mindsets or create environments which promote enjoyment and meaning in employees' work, in the light of fostering career adaptability.

Limitations & Future Research

This study has several limitations. Firstly, the data that were used, were drawn from only one point in time. This makes it impossible to make statements about the causality (or reverse causality) of the relationships. For instance, it can be possible that employees' who possess the psychological resources to adapt to career changes see that they can adapt, and therefore show a stronger professional skills and abilities growth mindset. To be able to explore this causality in the future, longitudinal or experimental studies should be conducted.

Another limitation of the study is the Cronbach's alfa of the construct professional skills and abilities growth mindset, which is questionable (Cronbach's alfa = .67). However, the scores on the items were still included in the analyses because the construct is an important part of this study.

Finally, the sample consisted, for the most part, of participants who had attained a university degree. This makes the results hard to generalize to the entire population of employees, because individuals with university degrees will probably work in different types of jobs than people who only finished secondary education. For future research it would be wise to recruit a more diverse sample. That way insight on growth mindset and career adaptability across different job types and people with different educational backgrounds can be gained.

Another interesting aspect to investigate in future research are different underlying variables that could explain why there was no moderation effect. One of these variables could be the way employees' feel their extrinsic rewards are distributed. For example, Thibault-Landry et al. (2016) found that when financial incentives were fairly distributed it made them feel more competent and autonomous. By looking at the context in which rewards are perceived, perhaps the moderating role of these rewards could be explained.

Conclusion

The current study shows the positive relationship between a profession skills and abilities growth mindset, perceived intrinsic rewards and career adaptability. The hypothesized moderation effects of perceived intrinsic and extrinsic rewards on the relationship between a professional skills and abilities growth mindset and career adaptability were not found. Nevertheless, this study highlights the importance of a growth mindset and intrinsic rewards in predicting career adaptability, which can help practitioners understand how to support employees in the preparation for adaptations in their careers. Future research

should look more into the moderating role of perceived intrinsic and extrinsic rewards, and other potential variables to gain a more comprehensive understanding of the relationship between a growth mindset, perceived rewards and career adaptability.

References

Caniëls, M. C. J., Semeijn, J. H., & Renders, I. H. M. (2018). Mind the mindset! the interaction of proactive personality, transformational leadership and growth mindset for engagement at work. *Career Development International, 23*(1), 48–66. https://doi.org/10.1108/CDI-11-2016-0194

Cerasoli, C. P., Nicklin, J. M., & Ford, M. T. (2014). Intrinsic motivation and extrinsic incentives jointly predict performance: A 40-year meta-analysis. *Psychological Bulletin*, *140*(4), 980–1008. https://doi-org.proxy-ub.rug.nl/10.1037/a0035661

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. https://doi-org.proxy-ub.rug.nl/10.1207/S15327965PLI1104_01

Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development.* Psychology Press. https://doi.org/10.4324/9781315783048

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*(2), 256–273. https://doi.org/10.1037/0033-295X.95.2.256

Dweck, C., Walton, G. M., & Cohen, G. L. (2014). Academic tenacity: Mindsets and skills that promote long-term learning. *Bill & Melinda Gates Foundation*. https://ed.stanford.edu/sites/default/files/manual/dweckwalton-cohen-2014.pdf.

Dweck, C. S., & Yeager, D. S. (2019). Mindsets: A view from two eras. *Perspectives on Psychological Science, 14*(3), 481–496. https://doi.org/10.1177/1745691618804166

Dysvik, A., & Kuvaas, B. (2008). The relationship between perceived training opportunities, work motivation and employee outcomes. *International Journal of Training and*

Development, *12*(3), 138–157. https://doi-org.proxy-ub.rug.nl/10.1111/j.1468-2419.2008.00301.x

Dysvik, A., & Kuvaas, B. (2011). Intrinsic motivation as a moderator on the relationship between perceived job autonomy and work performance. *European Journal of Work and Organizational Psychology*, *20*(3), 367–387. https://doi-org.proxy-ub.rug.nl/10.1080/13594321003590630

Dysvik, A., & Kuvaas, B. (2013). Intrinsic and extrinsic motivation as predictors of work effort: The moderating role of achievement goals. *British Journal of Social Psychology*, *52*(3), 412–430. https://doi-org.proxy-ub.rug.nl/10.1111/j.2044-8309.2011.02090.x

Fernet, C., Gagné, M., & Austin, S. (2010). When does quality of relationships with coworkers predict burnout over time? The moderating role of work motivation. Journal of Organizational Behavior, 31(8), 1163–1180. https://doi-org.proxy-ub.rug.nl/10.1002/job.673

Fernet, C., Guay, F., & Senécal, C. (2004). Adjusting to job demands: The role of work self-determination and job control in predicting burnout. *Journal of Vocational Behavior*, *65*(1), 39–56. https://doi-org.proxy-ub.rug.nl/10.1016/S0001-8791(03)00098-8

Foss, N. J., Minbaeva, D. B., Pedersen, T., & Reinholt, M. (2009). Encouraging knowledge sharing among employees: How job design matters. Human Resource Management, 48(6), 871–893. https://doi-org.proxy-ub.rug.nl/10.1002/hrm.20320

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, *26*(4), 331–362. https://doi-org.proxy-ub.rug.nl/10.1002/job.322

Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., van den Broeck, A., Aspeli, A. K., Bellerose, J., Benabou, C., Chemolli, E., Güntert, S. T., Halvari, H., Indiyastuti, D. L., Johnson, P. A., Molstad, M. H., Naudin, M., Ndao, A., Olafsen, A. H., Roussel, P., Wang, Z., & Westbye, C. (2015). The Multidimensional Work Motivation Scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology*, *24*(2), 178–196. https://doi-org.proxy-ub.rug.nl/10.1080/1359432X.2013.877892

Guan, Y., Liu, S., Guo, M. J., Li, M., Wu, M., Chen, S. X., Xu, S. L., & Tian, L. (2018). Acculturation orientations and Chinese student Sojourners' career adaptability: The roles of career exploration and cultural distance. *Journal of Vocational Behavior, 104*, 228-239. https://doi.org/10.1016/j.jvb.2017.11.008.

Haenggli, M., & Hirschi, A. (2020). Career Adaptability and Career Success in the Context of a Broader Career Resources Framework. *Journal of Vocational Behavior*. https://doi.org/10.1016/j.jvb.2020.103414

Han, S. J., & Stieha, V. (2020). Growth mindset for human resource development: A scoping review of the literature with recommended interventions. *Human Resource Development Review*, *19*(3), 309–331. https://doi.org/10.1177/1534484320939739

Hirschi, A. (2010). Positive Adolescent Career Development: The Role of Intrinsic and Extrinsic Work Values. *Career Development Quarterly*, *58*(3), 276–267. https://doi-org.proxy-ub.rug.nl/10.1002/j.2161-0045.2010.tb00193.x

Johnston, C. S. (2018). A systematic review of the career adaptability literature and future outlook. *Journal of Career Assessment, 26*(1), 3–30. https://doi.org/10.1177/1069072716679921

Kuvaas, B. (2006). Performance appraisal satisfaction and employee outcomes: Mediating and moderating roles of work motivation. *The International Journal of Human*

Resource Management, *17*(3), 504–522. https://doi-org.proxy-ub.rug.nl/10.1080/09585190500521581

Liang, H., Wang, M.-M., Wang, J.-J., & Xue, Y. (2018). How intrinsic motivation and extrinsic incentives affect task effort in crowdsourcing contests: A mediated moderation model. *Computers in Human Behavior*, *81*, 168–176. https://doi-org.proxy-ub.rug.nl/10.1016/j.chb.2017.11.040

Maggiori, C., Johnston, C. S., Krings, F., Massoudi, K., & Rossier, J. (2013). The role of career adaptability and work conditions on general and professional well-being. *Journal of Vocational Behavior*, *83*(3), 437–449. https://doi-org.proxy-ub.rug.nl/10.1016/j.jvb.2013.07.001

Maurer, T. J., Weiss, E. M., & Barbeite, F. G. (2003). A model of involvement in work-related learning and development activity: The effects of individual, situational, motivational, and age variables. *Journal of Applied Psychology*, *88*(4), 707–724. https://doi-org.proxy-ub.rug.nl/10.1037/0021-9010.88.4.707

Murphy, M. C., & Reeves, S. L. (2019). Personal and organizational mindsets at work. Research in Organizational Behavior, 39, N.PAG. https://doi-org.proxy-ub.rug.nl/10.1016/j.riob.2020.100121

Nussbaum, A. D., & Dweck, C. S. (2008). Defensiveness versus remediation: Self-theories and modes of self-esteem maintenance. *Personality and Social Psychology Bulletin*, *34*(5), 599–612. https://doi-org.proxy-ub.rug.nl/10.1177/0146167207312960

Pouyaud, J., Vignoli, E., Dosnon, O., & Lallemand, N. (2012). Career adapt-abilities scale-France form: Psychometric properties and relationships to anxiety and motivation. *Journal of Vocational Behavior, 80*(3), 692–697. https://doi-org.proxy-ub.rug.nl/10.1016/j.jvb.2012.01.021

Richer, S. F., Blanchard, C., & Vallerand, R. J. (2002). A Motivational Model of Work Turnover. *Journal of Applied Social Psychology*, *32*(10), 2089–2113. https://doi-org.proxy-ub.rug.nl/10.1111/j.1559-1816.2002.tb02065.x

Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior*, *98*, 17–34. https://doi-org.proxy-ub.rug.nl/10.1016/j.jvb.2016.09.002

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. https://doi-org.proxy-ub.rug.nl/10.1037/0003-066X.55.1.68

Savickas, M. L. (1997). Career adaptability: An integrative construct for life-span, life-space theory. *The Career Development Quarterly*, *45*(3), 247–259. https://doi-org.proxy-ub.rug.nl/10.1002/j.2161-0045.1997.tb00469.x

Savickas, M. L. (2005). The Theory and Practice of Career Construction. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work.* (pp. 42–70). John Wiley & Sons, Inc.

Schmitt, A., & Scheibe, S. (2022). Beliefs about the malleability of professional skills and abilities: Development and validation of a scale. Journal of Career Assessment. https://doi.org/10.1177/10690727221120367

Shin, Y.-J., & Kelly, K. R. (2013). Cross-Cultural Comparison of the Effects of Optimism, Intrinsic Motivation, and Family Relations on Vocational Identity. *Career Development Quarterly*, *61*(2), 141–160. https://doi-org.proxy-ub.rug.nl/10.1002/j.2161-0045.2013.00043.x

Shin, Y.-J., & Lee, J.-Y. (2017). Attachment, career-choice pessimism, and intrinsic motivation as predictors of college students' career adaptability. *Journal of Career*

Development, *44*(4), 311–326. https://doi-org.proxy-ub.rug.nl/10.1177/0894845316653472

Spurk, D., Kauffeld, S., Meinecke, A. L., & Ebner, K. (2016). Why do adaptable people feel less insecure? Indirect effects of career adaptability on job and career insecurity via two types of perceived marketability. *Journal of Career Assessment*, *24*(2), 289–306. https://doi-org.proxy-ub.rug.nl/10.1177/1069072715580415

Thibault-Landry, A., Gagné, M., Forest, J., Guerrero, S., Séguin, M., & Papachristopoulos, K. (2017). The relation between financial incentives, motivation, and performance: An integrative SDT-based investigation. *Journal of Personnel Psychology*, *16*(2), 61–76. https://doi-org.proxy-ub.rug.nl/10.1027/1866-5888/a000182

Trépanier, S., Vallerand, R. J., Ménard, J., & Peterson, C. (2020). Job resources and burnout: Work motivation as a moderator. *Stress and Health: Journal of the International Society for the Investigation of Stress*, *36*(4), 433–441. https://doi-org.proxy-ub.rug.nl/10.1002/smi.2939

Van den Broeck, A., Howard, J. L., Van Vaerenbergh, Y., Leroy, H., & Gagné, M. (2021). Beyond intrinsic and extrinsic motivation: A meta-analysis on self-determination theory's multidimensional conceptualization of work motivation. *Organizational Psychology Review*, *11*(3), 240–273. https://doi-org.proxy-ub.rug.nl/10.1177/20413866211006173

Wuensch, K. L. (2017). Regression Coefficients: Unstandardized versus Standardized. East Carolina University. http://core.ecu.edu/psyc/wuenschk/MV/multReg/Standardized_Regression_Coefficien ts.docx

Ye, L. (2015). Work values and career adaptability of Chinese university students. *Social Behavior and Personality: An International Journal*, *43*(3), 411–422. https://doi-org.proxy-ub.rug.nl/10.2224/sbp.2015.43.3.411

Yeager, D. S., & Dweck, C. S. (2020). What can be learned from growth mindset controversies? *American Psychologist*, *75*(9), 1269–1284. https://doi-org.proxy-ub.rug.nl/10.1037/amp0000794

Young, G. J., Beckman, H., & Baker, E. (2012). Financial incentives, professional values and performance: A study of pay-for-performance in a professional organization. *Journal of Organizational Behavior*, *33*(7), 964–983. https://doi-org.proxy-ub.rug.nl/10.1002/job.1770

Zacher, H. (2015). Daily manifestations of career adaptability: Relationships with job and career outcomes. *Journal of Vocational Behavior*, *91*, 76–86. https://doi-org.proxy-ub.rug.nl/10.1016/j.jvb.2015.09.003

Figure 1

Conceptual Models of the Expected Relationships Between a Professional Skills and Abilities Growth Mindset, Career adaptability and Perceived Rewards.

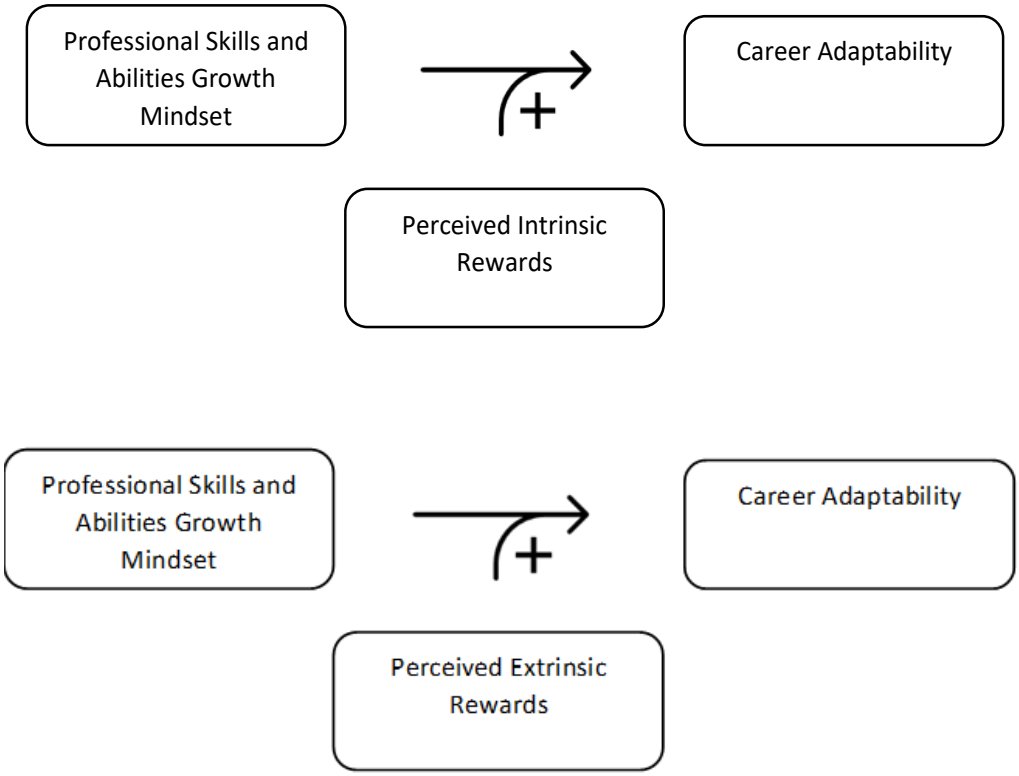

Table 1

Means, standard deviations and correlations.

	M	SD	1.	2.	3.
1. Career Adaptability	3.58	.55			
2. Professional Skills and Ablities Growth Mindset	4.02	.61	.33**		
3. Intrinsic Rewards	3.85	.52	.20**	.21**	
4. Extrinsic Rewards	3.62	.82	.18**	.26**	.46**

Note. $N = 221$ ** $p < .01$.

Table 2

Hierarchical regression model with perceived intrinsic rewards and professional skills and abilities growth mindset as predictors, and career adaptability as dependent variable.

Predictor	*B*	95% CI for B		*SE (B)*	β	R^2	ΔR^2
		Lower	Upper				
Step 1						.124	.124
Constant	3.574**	3.506	3.642	.035			
Intrinsic Rewards	.143*	.009	.276	.068	.136		
Professional Skills and Ablities Growth Mindset	.265**	.151	.379	.058	.297		
Step 2						.125	.000
Constant	3.576**	3.506	3.645	.035			
Intrinsic Rewards	.143*	.009	.277	.068	.137		
Professional Skills and Ablities Growth Mindset	.263**	.147	.378	.059	.295		
Interaction	-.029	-.231	.173	.103	-.018		

Note. ** $p < .001$. * $p < .05$

Table 3

Hierarchical regression model with perceived extrinsic rewards and professional skills and abilities growth mindset as predictors, and career adaptability as dependent variable.

Predictor	*B*	95% CI for B		*SE (B)*	β	R^2	ΔR^2
		Lower	Upper				
Step 1						.115	.115
Constant	3.574**	3.505	3.642	.035			
Extrinsic Rewards	.065	-.022	.151	.044	.098		
Professional Skills and Ablities Growth Mindset	.268**	.152	.384	.059	.301		
Step 2						.115	.000
Constant	3.573**	3.502	3.643	.036			
Extrinsic Rewards	.065	-.022	.152	.044	.097		
Professional Skills and Ablities Growth Mindset	.270**	.148	.393	.062	.303		
Interaction	.008	-.113	.128	.061	.008		

Note. ** $p < .001$.

Appendix

Assumption Checks for Linear Regression

The histograms of standardized residuals (see Figure A1 & A4) and the normal P-P plots (see Figure A2 & A5) show that the errors were approximately normally distributed, so the assumption of normality was met. The scatterplots of standardized predicted values (see Figure A3 & A6) show that the assumptions of homoscedasticity and linearity were also met. Finally, the Durbin-Watson values of 1.932 for the first regression model and 1.967 for the second regression model show that the data met the assumption of independent errors.

Figure A1

Histogram of standardized residuals for the regression model with career adaptability as dependent variable, and a professional skills and abilities growth mindset and perceived intrinsic rewards as predictors.

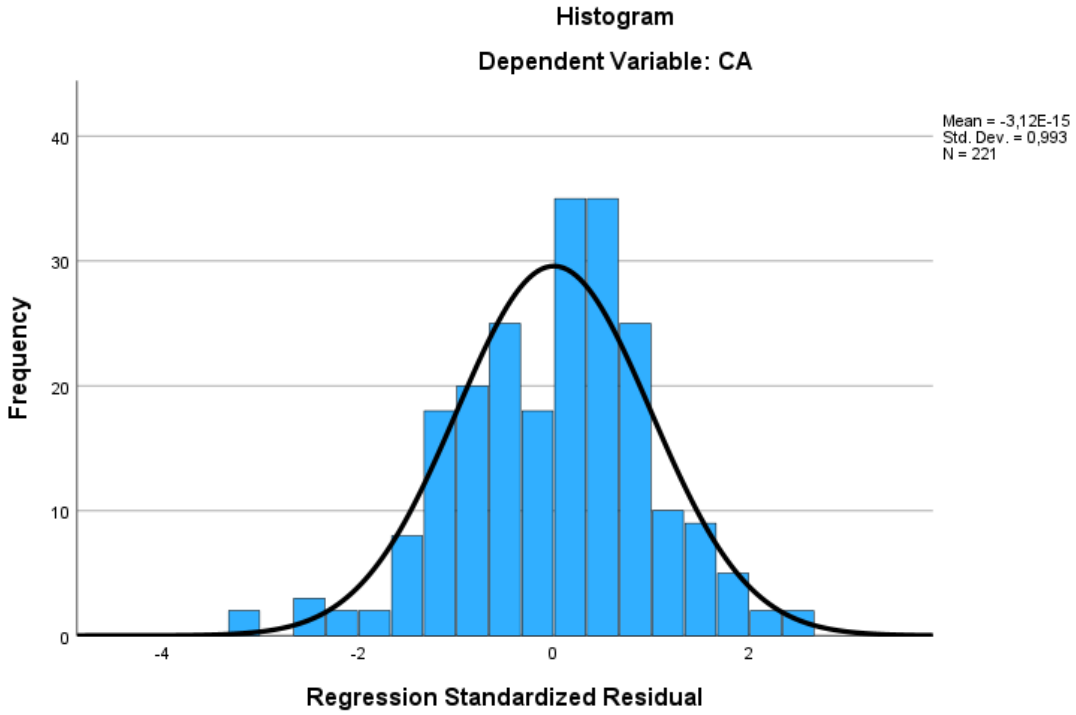

Figure A2

Normal P-P plot of standardized residuals for the regression model with career adaptability as dependent variable, and a professional skills and abilities growth mindset and perceived intrinsic rewards as predictors.

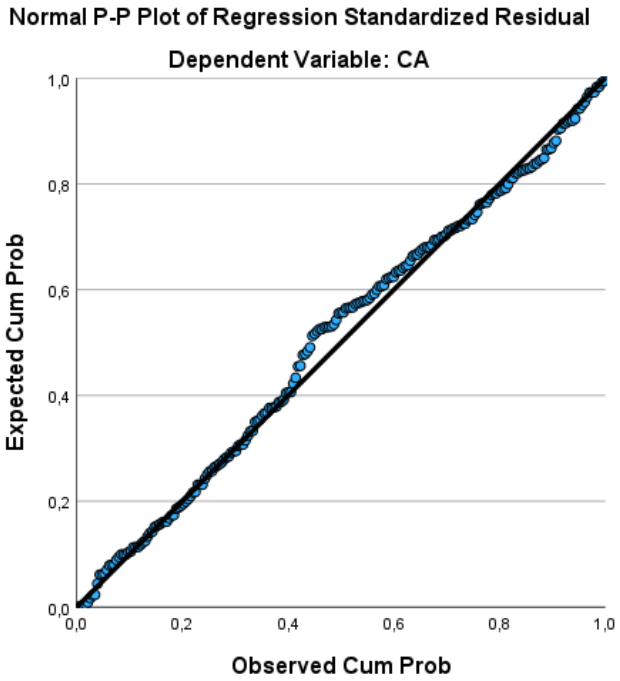

Figure A3

Scatterplot of standardized predicted values for the regression model with career adaptability as dependent variable, and a professional skills and abilities growth mindset and perceived intrinsic rewards as predictors.

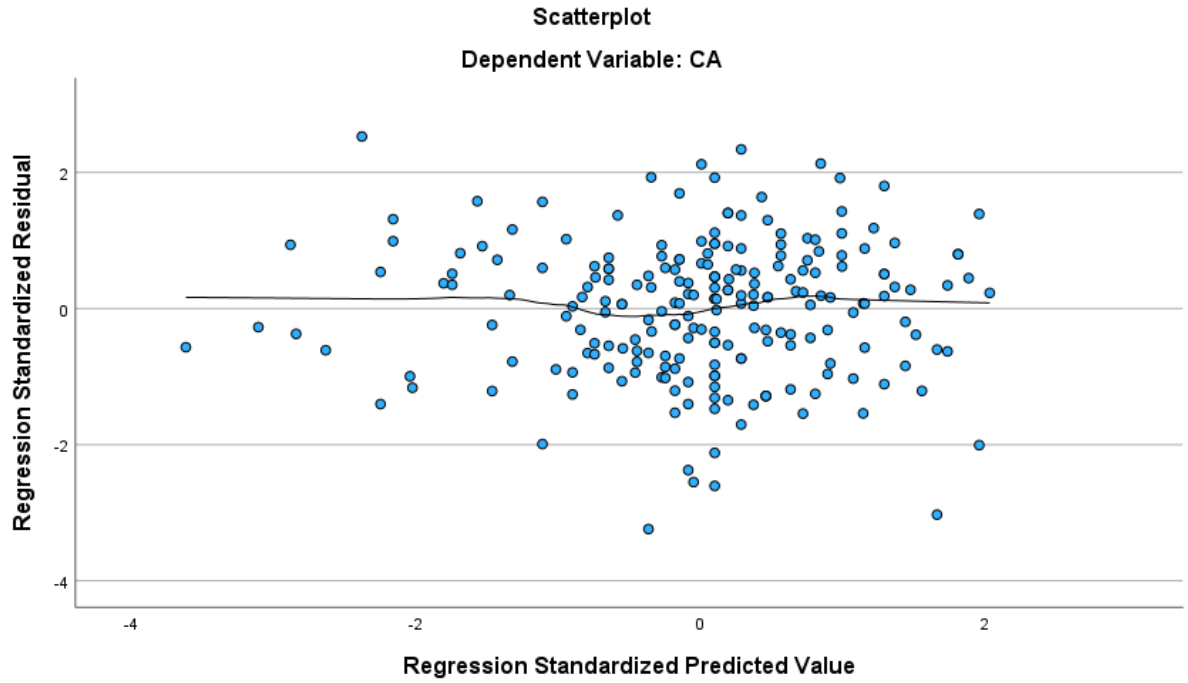

Figure A4

Histogram of standardized residuals for the regression model with career adaptability as dependent variable, and a professional skills and abilities growth mindset and perceived extrinsic rewards as predictors.

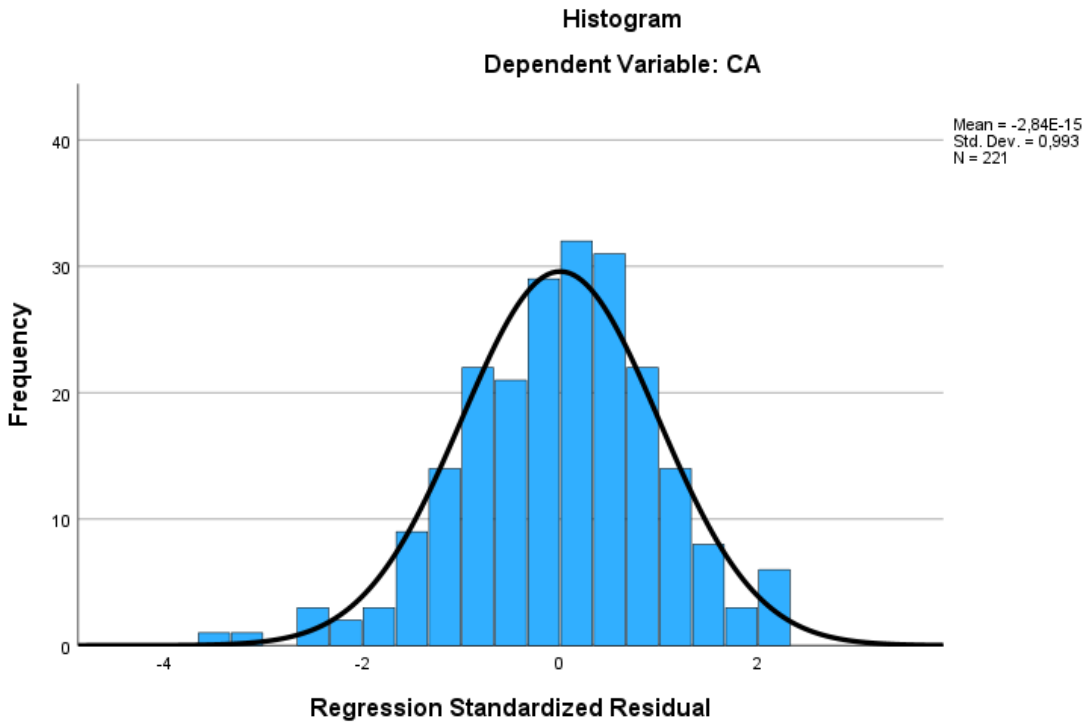

Figure A5

Normal P-P plot of standardized residuals for the regression model with career adaptability as dependent variable, and a professional skills and abilities growth mindset and perceived extrinsic rewards as predictors.

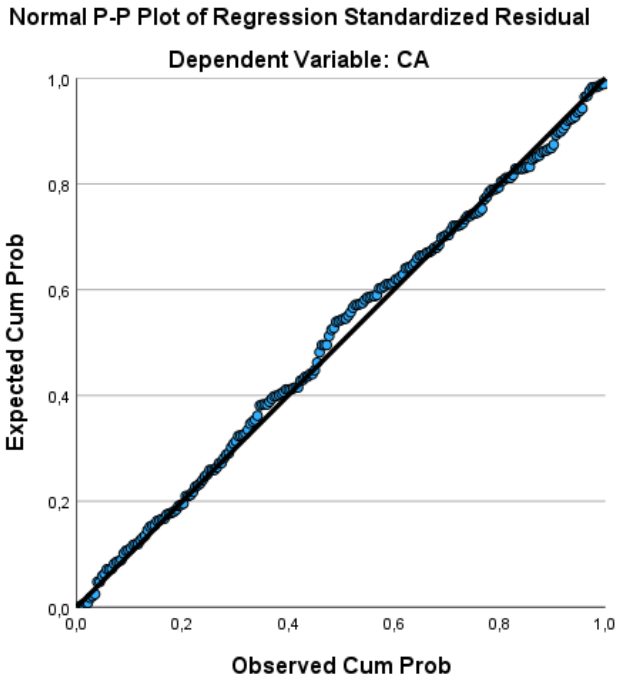

Figure A6

Scatterplot of standardized predicted values for the regression model with career adaptability as dependent variable, and a professional skills and abilities growth mindset and perceived extrinsic rewards as predictors.