

Determinants Influencing Employees Creativity: A Qualitative Study in the Ethiopian Institute of Agricultural Research

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Abstract

The dynamic componential model of creativity and innovation in organizations is well researched in creativity research. This thesis proposed an integrative model based on the dynamic componential model; people's relations to their work and family-work enrichment theory were incorporated. The proposed integrative model was examined by collecting data from the EIAR in Ethiopia. Thus, this paper explores how various determinants influence employees' creativity in the workplace. We conducted an explorative qualitative study using a deductive research design. The qualitative study design's sample comprised nine key decision-makers, who were interviewed about creativity, innovation, and factors influencing employees' creativity in the EIAR. The findings supported the applicability of the dynamic componential model of creativity and innovation in organizations and provided evidence that individual factors and work context factors enable employee creativity. Further, this paper provides exploratory insights into a so far neglected source of work orientations and family-work resource spillover influences on employees' creativity.

Keywords: Creativity, individual factors of creativity, work orientations, work environment, family-work resource spillover

1. Introduction

Creativity is often regarded as a vital source of competitive strength for organizations (Ferreira et al., 2020) since it has become treasured across diverse tasks, professions, and industries (Kršlak & Ljevo, 2021; Lee et al., 2019; Shalley et al., 2004). In organizations that prioritize diversity, change, and adaptation,

creative employees are considered a valuable asset (Liu et al., 2017). In fact, many academics contend that organizations seeking to gain a competitive edge must prioritize boosting the creative performance of their workforce. Employee creativity contributes significantly to organizational innovation, effectiveness, and survival (Ivcevic et al., 2021). Therefore, for organizations aiming to establish a strong foundation for organizational creativity and innovation, having creative employees is essential (Fuchs et al., 2021).

To identify the determinants influencing individual and team creative behavior, various theories and models of creativity and innovation have been developed. These include the componential theory of creativity and innovation in the organizational setting by (Amabile, 1988), the interactionist theory proposed by Woodman (1993), and an organizational culture (OC) model designed to promote creativity and innovation developed by Martins & Martins (2002).

These theories, however, only consider how individual and organizational context variables affect the creativity of employees. A substantial body of research has investigated the conditions necessary to foster employees' creativity, building on aspects of the aforementioned theories and models. The results indicate that creativity is affected by individual characteristics (Amabile, 1988; Amabile et al., 1996; Green et al., 2017) and organizational characteristics (Cummings & Oldham, 1997; Liu et al., 2017; Malek et al., 2020; Politis, 2005; Zhou & George, 2003). Few studies have attempted to extend the early theories by examining factors outside the organizations that may influence employees' creativity abilities. For example, other factors identified include family and friends (Madjar et al., 2002; McKersie et al., 2019; Tang et al., 2017), supportive family (Guo et al., 2021), and social capital dimensions and employee creativity (Oussi & Chtourou, 2020).

Research suggests that employees' creativity is influenced by many determinants, including motivation (Liu et al., 2016), personality and thinking styles (Wu et al., 2014), as well as creative personal and role identities (Fischer et al., 2019), work orientation (Liv et al., 2020), work contexts (Appu & Sia, 2017), and family-work resource spillover (Tang et al., 2017). Though there has been considerable research on employees' creativity via psychological, organizational, and work factors in isolation (Amabile & Pratt, 2016), the question remains: how do these determinants work collectively to contribute to employees' creativity? Despite evidence showing that these characteristics can all contribute to the creative process, the literature that focuses on these elements often does not take their overall influence into account. Indeed, in their review on creativity and innovation, Anderson et al. (2014) highlighted the need to further explore employees' creativity and specifically how these determinants might work in combination to foster employees' creativity. That is, by testing multiple determinants simultaneously.

Employees with different characteristics and perspectives exhibit varying levels of sensitivity to creativity, and their performance in a given task can be influenced by contextual factors (Li et al., 2018). Creativity, as an interaction model, confirms that it is the result of human and contextual interaction. In recent years, researchers have advanced the idea of work orientation from the perspective of individual expectations for work and subjective evaluation, which stresses the person's subjective perspective and work's purpose (Fetzer & Pratt, 2020). However, despite some progress in the study of work orientation, there are still limitations to be addressed. The literature on employee creativity and work orientation remains relatively scarce (Li et al., 2018). Some assumptions about work orientations lack empirical support (Cai et al., 2018) and the field as a whole has been criticized for its theoretical nature and the need for a deeper understanding of the mechanisms through which work orientations operate (Amabile & Pratt, 2016; Lee et al., 2019; Pratt et al., 2013). Given the limitations of earlier research, the goal of this study is to examine the relationship between work orientations and employees' creativity.

A gap was found in the research on "family-work resource spillover" as an antecedent of employees' creativity. This study employed the modified Amabile (1988) componential theory of creativity and innovation in organizations. Amabile (1988) demonstrated that the theory incorporates individual and organizational factors that influence employees' creativity at work and organizational innovation. However, Amabile & Pratt (2016) stated that one limitation of the componential theory of Amabile (1988), as implemented in the work context, is that it concentrates exclusively on internal features within the individual

and the organization. It fails to contain external features outside the organization. Thus, Amabile & Pratt (2016) added external factors to the new model. In this regard, there is a lack of creativity literature that investigates factors external to organizations, such as family-work resource spillover (Hong et al., 2018; Tang et al., 2017). Therefore, the primary objective of this study is to gain a comprehensive understanding of the various determinants that influence employees' creativity within agricultural research institutions, specifically the Ethiopian Institute of Agricultural Research (EIAR). The EIAR is responsible for conducting research aimed at developing agricultural technologies that are competitive in the market.

2. Theoretical background

2.1 The dynamic componential model of creativity and innovation

Numerous empirical studies that highlight the significance of creativity and innovation can be found, and during the past 30 years, there has been a considerable increase in study efforts (Amabile & Pratt, 2016; Liu et al., 2017). However, the lines between the two ideas of creativity and innovation remain unclear in modern times (Anderson et al., 2014). Arguments are made that the lack of compelling theoretical advancements and reliable models hinders focused study and provides clear, practical instructions (Popescu, 2022). In response to identifying this gap, Amabile & Pratt (2016) updated Amabile's well-known model of creativity and innovation in organizations to include the most recent theoretical advancements on motivational factors and their effects on individual and contextual multi-level approaches.

The 2016 edition of the model includes new study findings on the following topics: the significance of work, work progress, affect, work orientations, external influences, and synergistic extrinsic motivation (Amabile & Pratt, 2016). It is frequently suggested that these elements have an impact on creativity within organizations (Baer, 2012; Davis, 2009; Fūzi et al., 2022; Tanjung et al., 2022). Their dynamic componential model of creativity and innovation in organizations is a complex, multivariate theory (Amabile & Pratt, 2016). The model is broadly clustered into organizational innovation and individual creativity which are displayed as strongly interdependent (Amabile & Pratt, 2016). In order to create something new, both clusters are described using the same three fundamental multiplicative components: motivation, resources, and processes. Taking acts for satisfaction is one of the three elements of personal creativity (intrinsic motivation), individual skills and knowledge (skills), and thinking abilities and perceptual or cognitive styles (creativity-relevant processes). The three organizational innovativeness components include the openness to take new risks (motivation to innovate), the offering of funds, time, and labor (resources), in addition to relational and transactional incentives (HRM practices).

The dynamic componential model of creativity and innovation brought in four new constructs. The first was the progress principle, which is described as "the central mechanism by which individuals and teams can maintain high levels of creative productivity over long periods of time, even in the face of extremely difficult innovation problems" (Amabile & Pratt, 2016). The meaningfulness of the work to people who perform it was the second new element. Meaningful work is defined as 'work that is perceived as "positive" and "significant" in some way' Pratt & Ashforth, 2003 cited in (Amabile & Pratt, 2016, p. 170). The reasoning on how meaningful employment influences the creative process in two different ways: through intrinsic motivation and reinforcing the feedback loop, which increases persistence in a creative pursuit. The third main change to (Amabile, 1988) model is the embodiment of affect. The authors expanded on an earlier theoretical concept and incorporated affect in the new model in two key ways. First, affect can come from both internal and external sources for the person producing the creative work. The second, and most hypothetical, revision of the affect model results from a potential reconciliation of the seemingly inconsistent findings involving creativity and affect. The fourth inclusion is synergistic extrinsic motivation. This required changing a fundamental presumption of the (Amabile, 1988) paradigm, which held that employees' intrinsic motivation had the greatest influence on their creativity.

2.2 Work Orientation (People's relations to their work)

The term "work orientation" was initially proposed by Bellah et al. (1985). They suggested a tripartite concept outlining the three different ways that a person might find fulfillment via their work: as a job, a career, and a calling. People who view their profession as a job often concentrate on the monetary rewards. People who view their jobs as career-oriented pursuits are driven by a desire for more power, social status, career development, and promotion. People who consider their jobs to be a vocation are primarily concerned with the social worth of their work; they desire to improve society and frequently think that their work does so. Wrzesniewski et al. (1997) used Bellah et al.'s (1985) conceptualization to develop a measure of work orientation.

Cho & Jiang (2021) found that the three orientations were associated differently with individuals' preference for challenging work: employees with a strong job orientation were more likely to avoid challenging work, whereas those with a strong calling orientation enjoyed it, and those with a career orientation had no preference in this area. Additionally, a calling orientation was positively related to placing value on benevolence, a career orientation was positively related to valuing power and accomplishment, and a job orientation was adversely related to achievement values (Murray et al., 2013). When discussing the choice of a job, the worker's beliefs and attitudes are referred to as their work value. These include their useful orientation, inner preferences, interpersonal harmony, innovation orientation, and long-term growth (Liv et al., 2020).

2.3 Family-work enrichment theory and resource spillover

An overview of empirical studies on the positive interconnectedness between the family and work roles of an employee, Greenhaus et al. (2006) proposed a process of family-work enrichment. The enrichment process represented "a transfer of positive experiences" from family to work (p. 73). Describing the process from the aspect of resources, Chan et al. (2020) stated that positive experiences first need to develop into the employee's personal resource, which then spill over across the family-work boundary. Personal resources, as opposed to contextual resources, are resources that are specific to an individual and can therefore cross the line between family and job (Hobfoll, 2002). These resources include physical as well as intangible ones like mental and emotional (Tang et al., 2017). In fact, the available indicators of family-work enrichment mostly capture the transfer of personal resources such as knowledge, happy feelings, and motivation (e.g., Carlson et al., 2019; Chan et al., 2020; Hanson et al., 2006; Lin et al., 2021). Additionally, prior research has shown that family activities, such as taking care of the home and getting enough sleep, enhance employees' personal resources, such as their capacity for problem-solving and energy, which they bring with them into their work lives (Hobfoll, 2002; Lin et al., 2021).

In this study, we cast the spillover of psychological resources as the key predictor of employees' workplace creativity. Following previous accounts of family-work positive spillover (e.g., Grzywacz & Marks, 2000; Hanson et al., 2006; Kapadia & Melwani, 2021), we define family-work resource spillover as the experience of employees with the transfer of psychological resources produced at home to the workplace. Among the transferable resources, psychological resources are the internal resources that give individuals the vigor and zeal to tackle activities (Sonnetag et al., 2020), positive moods (Du et al., 2018) and motivations (Tang et al., 2017).

3. Creativity in Agricultural Research Institutions

For agricultural research to help the rural poor, it must coordinate with other initiatives that strengthen the regulatory environment, free up resources, and increase local capacity for reacting to evolving technical and economic possibilities and challenges (Hanikel et al., 2019). Worldwide agricultural research centers have collaborated with local, national, and international partners to promote agricultural innovation and expansion since the 1970s. The restricted opportunities that smallholder farmers have to market their goods have frequently reduced the benefits that these farmers can obtain. Since 2000, many groups have

experimented with methods for fostering creativity in an effort to increase the advantages of agricultural research and development for smallholders (Gil et al., 2017).

It is commonly believed that advancing new technology will be crucial for small-scale farming systems in the global south to become more productive, sustainable, and resilient (Council, 2004; McIntyre, 2009; Shively et al., 2018; Xinbo, 2018). Development-oriented agricultural research is centered on the creation, testing, and diffusion of technology (Kaufmann, 2007; Thornton et al., 2017; Waha et al., 2018). How should agricultural development experts think about technical change in the context of small-scale farming systems, and how can it be most effectively and meaningfully documented, analyzed, and evaluated? Individuals and organizations engaged in development-oriented agricultural research have first-order challenges in comprehending technological change processes and evaluating their effects (Hanikel et al., 2019).

Human wellbeing has significantly improved during the past 25 years. There was a 42 percent decrease in the number of undernourished people in developing regions between 1990–1992 and 2012–2014 (Pocketbook, 2015). There are significant regional variances in the amount of progress made against poverty and hunger during that time, though: in South Asia, it has been slow, while in sub-Saharan Africa, it has gotten worse (Pocketbook, 2015). In the years 2012–2014, there were still 805 million individuals who were chronically undernourished (Pocketbook, 2015), practically all of them in underdeveloped nations. It is obvious that significant work has to be done to meet the targets for 2030 set forth in the Sustainable Development Goals (UNECA, 2015; World Bank, 2015), particularly Goal 2, which focuses on developing sustainable agriculture, attaining food security, improving nutrition, and ending hunger. It will take focused efforts to achieve the goal of making 70% more food available to meet the rapidly expanding demand, with an additional 2–3 billion people to feed over the next 40 years (Alexandratos & Bruinsma, 2012). The consequences of climate change on agriculture are already evident in many developing nations, and they will get worse in the future (Thornton et al., 2014).

Agriculture development is one of the methods being tried in developing nations to combat poverty. Enhancing agriculture is frequently viewed as a fundamental entry point in developing successful strategies for decreasing poverty. The significance of agriculture in doing so has been relatively well explored (Alston, 2010; Christiaensen et al., 2006; Kann et al., 2018), the key mechanism being agricultural research for development (AR4D). Research investment has been significantly and favorably impacted by the adoption of improved agricultural practices, technology, and policies, such as high-yielding wheat and rice varieties, fertilizers, pesticides, irrigation, and enabling legislation (Renkow & Byerlee, 2010).

Ideas are merely the starting point for innovation and change, according to creativity researchers; they cannot, by themselves, ensure transformation (Renkow & Byerlee, 2010). Although having creative qualities, using creative processes, and having creative insight may be necessary for positive change to happen, they are probably insufficient for bringing about systematic change because they do not address the difficulties involved in turning novel frameworks and models into actual innovations. While it is critical to recognize that organizational learning is required for creativity to flourish (Lozano, 2014), "discerning and inquisitive learning can help to institutionalize and consolidate new, more sustainable mental models" (p. 214). Numerous creativity theories provide insight into the causes, drivers, and barriers of creative activity that could motivate people and groups to produce more successful organizations (Cucuzzella, 2016; Family, 2003; Lozano, 2014; Mitchell & Walinga, 2017).

4. Current study

The theoretical base for this study is Amabile & Pratt (2016) dynamic componential theory of creativity and innovation in organizations. Thus, the model shows a direct relationship between the individual creativity component (skills in the task domain, creativity-relevant processes, and intrinsic task motivation). Therefore, we plan to explore the following propositions:

Proposition 1. Individual creativity factors—(a) skills in the task domain, (b) creativity-relevant processes, and (c) intrinsic task motivation—are influences employees' creativity.

When discussing the choice of a job, the worker's beliefs and attitudes are referred to as their work value. These include their useful orientation, inner preferences, interpersonal harmony, innovation orientation, and long-term growth (Liv et al., 2020). Amabile & Pratt (2016) argue that progress in creative work will be more meaningful, and thus more motivating, to some workers than others. For this reason, it is important to explore employees' work orientations and their creativity.

Proposition 2: Work orientations—(a) job, (b) career, and (c) calling—are positively related to employees' creativity.

Another important area of consideration for the present study is whether determinants of work environment influence employees' creativity. Houghton & Dawley (2015) in order to sustain employee creativity and foster organizational innovation, it has been asserted that firms should work to improve the stimulants and remove the barriers. Employees' creativity is influenced by a number of factors. For example, Suifan et al. (2018) illustrated that work resources can boost creativity. Similarly, (Amabile et al., 1996) stated that human's creativity may be psychologically affected by perceptions of the availability of appropriate resources by encouraging attitudes toward the intrinsic worth of the work that has been done. Managerial encouragement is also considered a factor that encourages employees' creativity. Koseoglu et al. (2017) argued that effective leadership requires managers to be creative, and their creativity can influence their team members' self-perception and creativity. According to Shalley et al. (2004) leadership must actively encourage, promote, and support creativity in order to make it possible. We expect determinants of work environment influence employees' creativity. Thus, we propose the following:

Proposition 3. Determinants of work environment—(a) sufficient resources, (b) realistic work load pressure, (c) freedom, (d) challenging work, (e) work group support, (f) managerial encouragement, (g) organizational encouragement and (h) lack of organizational impediment—are influences employees' creativity.

We are also interested in expanding theory through qualitative methods to determine whether concepts of family-work resource spillover from home to work, which are external variables of the organizational setting, affect employees' creativity. This study will fill a theoretical gap by exploring the impact of family-work resource spillover on workers' creativity in developing countries.

Proposition 4. Family-work resource spillover has an impact on employees' creativity.

5. Method

5.1. Study participants

The researchers interviewed nine senior key decision-makers from one Deputy Director General for Administration and Capacity Building, two Research Directorates, four Research Center Directors, and two Support Directorates of the EIAR (see Table 1). There are two reasons for choosing key informants. First, it can be expected that the directors and directorates have a thorough understanding of the workplace and the creativity of the employees. Second, how employees are creative in the setting of the institute is directly influenced by the directors and directorates. The gender and educational level of the respondents' personal profiles are displayed. In terms of gender, all respondents were men; nevertheless, only two respondents had a master's degree, while the majority had a PhD.

Table 1 Personal Profiles of Qualitative Interview Participants

Participants	Centers Fictitious Names	Gender	Level of Education
Participant 1	A	Male	PhD
Participant 2	B	Male	MBA
Participant 3	C	Male	MSC
Participant 4	D	Male	PhD
Participant 5	E	Male	PhD
Participant 6	F	Male	PhD
Participant 7	G	Male	PhD
Participant 8	H	Male	PhD
Participant 9	I	Male	PhD

5.2. Interview process

The interviews took place at the workplaces of the participants. Before completing the interviews, letters outlining the study and its objective were sent to the EIAR's respective human resources department, as required by the UoG Business and Economics research ethics policy. They were asked to send this letter to a list of key decision-makers. Arifin (2018) stated that all potential participants should receive adequate information for the completion of the necessary informed consent forms.

Semi-structured interviews, in addition to probe questions, were conducted in Amharic with nine key decision-makers in the EIAR. An interview protocol was used to structure the interview to ensure that the aims of the research were upheld. As a result, nine one-to-one interviews were conducted with each participant. All of the interviews were conducted in the same way. Each interview began with the researcher introducing himself, stating the topic and interview goals, and highlighting the participant information sheet and consent form. All interviewees were requested to sign a consent form, which they did. In around five minutes, the researcher delivered the above facts. The interviews lasted about an hour on average. According to the UOG Business and Economics research ethics guidelines, all interviews were audiotaped and transcribed.

5.3. Data analysis process

Qualitative data analysis involves deriving meaning from a dataset (Lester et al., 2020). It can encompass a wide range of materials, including conversational data, images, observations, and various types of interviews (e.g., unstructured, semi-structured, or structured). The specific approach to qualitative data analysis can vary depending on the theoretical perspective, methodology, research tradition, and field of study (Lochmiller & Lester, 2015). The following sections will discuss the processes of transcription, translation, coding, and qualitative data analysis methods employed in this study.

One of the more time-consuming but crucial components of the in-depth qualitative research process is the recording and verbatim transcription of interviews. According to Oltmann(2016), recording technology was used to achieve the highest possible accuracy of the scenario, which resulted in data collection for research purposes. The EIAR Human Resource Management and Development Directorate had requested that the interviews be audiotaped. As a result, all interviews were audio recorded to help with transcription.

The process of translating qualitative data is not simple; the difficulties relating to translation from one language to another are more complicated than those relating to transcription (Oluwafemi et al., 2021; Schleiermacher & Bernofsky, 2021). Researchers must address the embeddedness of the language's meaning in the culture, positionality and its impact on data generation, and linguistic disparities when translating qualitative research. Amharic is the official language of Ethiopia, although English is used widely in

universities and research institutions. Despite this, the researchers determined that the interview language should be Amharic to avoid potential bias. Therefore, semi-structured interviews were conducted in Amharic. After the interviews, the researchers translated the Amharic into English. To ensure the validity of the translation, a back translation was conducted by an independent expert.

Deductive coding was used in this study based on emerging theories of creativity (e.g., Amabile, 1988; Amabile et al., 1996; Amabile & Pratt, 2016; Martins & Martins, 2002; O'Shea & Buckley, 2007b; Woodman, 1993). Generally, in deductive coding, the codes are theoretical concepts or topics resulting from existing literature. If distinctions occur within a given code or if new and interesting things emerge that are not captured by the existing codes, the coding frame can be modified during the coding process (Skjott Linneberg & Korsgaard, 2019).

The qualitative analysis procedure began once the interviews with nine key decision-makers were completed. The data was coded using a thematic analysis based on the literature with the purpose of studying employees' creativity in the EIAR. This underlined the importance of using pre-determined themes in the interview as prompts to elicit additional information: determinants that influence employees' creativity in the EIAR. To undertake a fine-grained analysis of the qualitative data, a maximum of three layers of nodes were used in coding.

To have more control over the data, the researchers manually conducted the analysis based on the interview schedule's questions, utilizing different tabular Microsoft Word and Excel files. As a result, manual coding was significantly simpler and provided greater data management. The qualitative data were manually processed in order to examine the quantitative findings of the study and validate that the data analysis met the research questions. According to Kiger & Varpio (2020), manually performing the analysis might enable a better contextual comprehension of the ideas or patterns that arise from the data analysis.

6. Results and Discussion

6.1. Individual creativity factors

All respondents said that individual factors have an impact on employees' creativity. Therefore, interviewees' responses led to further categorization of the different areas of focus, which are skills in the task domain, creativity-relevant skills, and intrinsic task motivation.

a) Skills in the task domain

Directors respond to the importance of skills in the task domain such as knowledge and creativity in organizations. Following are some examples of responses:

Creativity is greatly influenced by a person's familiarity with the work at hand and their capacity to carry it out (Respondent 4).

Knowledge, intelligence, and technical skills are significant and valuable to organizations because they are usually targeted skills learned from researchers. When a specialist has creative-self efficacy and can translate that knowledge into creative ideas, it can transform innovation and ensure it is specialized for a particular field, making it extraordinarily valuable for end-users (Respondent 7).

Respondents' opinions on the link between personal factors and creativity agreed with Amabile's (1997) there are three key components of individual creativity: Creative-self efficacy, creativity-relevant skills, and intrinsic task motivation (Emami et al., 2022). The findings are consistent with Amabile et al.'s (1996) componential theory of individual creativity, which includes skills in the task domain as a component. The secret to coming up with a solution that is appropriate is having knowledge in the relevant field (Duarte Alonso et al., 2018). For example, Emami et al. (2022) explain that domain-relevant abilities serve as the foundation for any performance and are hence necessary. What this component does is combine factual knowledge with technical proficiency and special abilities that pertain to a certain domain.

b) Creativity-relevant processes

Respondents emphasized the fact that creativity-relevant skills are applicable to personality traits, paving the way for independence, taking risks, having a disciplined work style, and having the ability to come up with ideas. The interviewees took note of this when responders 2 and 5 mentioned that:

Creativity-relevant processes will bring an extra flavor to creative performance (Respondent 2).

Creativity-relevant processes are the ability to produce original ideas in order to identify, research, and creatively solve problems (Respondent 5).

Previous studies indicate that employees with creative cognitive styles have greater tendencies to be creative at work (Nightingale et al., 2018). Birdi et al. (2016) observed the importance of creativity-relevant processes. Amabile (2011) stated that conducting playful activities or engaging in fantasies can positively affect the engagement of creativity-relevant processes. More inventive and creative thinkers enjoy addressing their work in novel, creative, and efficient ways (Binyamin & Carmeli, 2017; Karami & Henshon, 2023). To come up with original and perhaps useful ideas, both sets of skills are necessary. As demonstrated by Birdi et al. and others (Birdi et al., 2016; Duarte Alonso et al., 2018; Emami et al., 2022), creative problem-solving training can help people develop their creative thinking abilities.

c) Intrinsic task motivation

During the interview with directors, several factors were mentioned that directly motivate employees to stay committed to their work and indicated that intrinsic task motivation is a basic determinant of employees' creativity. Following are some examples of responses:

When compared to unmotivated employees, motivated individuals are frequently much more creative and productive. They frequently look for more efficient ways to carry out their tasks and are quality-conscious (Respondent 1).

When workers feel motivated, they tend to be more inventive, search for more efficient ways to complete tasks, and focus more on the overall quality of their work (Respondent 8).

For intrinsic task motivation, Malik et al. (2019) made the case that people who are genuinely motivated work hard because they are interested, curious, or eager to learn. It is believed that intrinsic task motivation boosts positive affect, cognitive flexibility, risk-taking, and perseverance, which in turn increases creativity. These psychological states accompanying intrinsic task motivation are likely targeted at creative engagements (Fischer et al., 2019; Ghosh et al., 2020). Employees may evaluate different work parameters on the spur of the moment when in these psychological states, and they may also further investigate innovative and even risky ways to address the core issue through sustained and in-depth cognitive engagements (Siyal et al., 2021; Zhang et al., 2023). As a result, the opinions of the respondents were in line with those of other scientific investigations that found a link to be positive between domain-relevant skills, creativity-relevant processes, intrinsic task motivation, and individual creativity (e.g., Alonso et al., 2018; Birdi et al., 2016; Emami et al., 2022; Siyal et al., 2021).

6.2 Work orientation

The interview question seeks a deeper understanding of work orientations as an assortment of creative variables in order to investigate how they affect employees' creativity. The next paragraphs go into greater detail regarding each respondent's opinions and thoughts on each unique work orientation, as well as establishing three sub-themes that serve as the foundation for the development of a theory: work as a job, as a career, and as a calling.

a) Job

The comments from only two respondents indicate a relationship between employee job orientation and creativity. For instance, respondent 3 made it clear that a positive, indirect association exists between job orientation and employee creativity.

By encouraging an employee's inspiration to create new ideas, and by giving them the required motivation to do so, thinking of a job as a source of income helps to foster employee creativity indirectly (Respondent 3).

Another example of how job orientation affects developing creative ideas was provided by respondent 7:

In our country's context, simply encouraging employees to come up with creative ideas, providing them with more opportunities for action, and providing them with the opportunity to learn about the task and acquire task-related knowledge, along with income expectations and the belief that work is expected to be economically beneficial, have a direct impact on employees' creativity.

The interview findings suggested that, more or less, job orientation is a person's perception that their association with work is one of exchange of goods and services and that the fundamental drive of labor comes from its capacity to provide the appropriate tangible benefits and financial gain. These results contrast with what was found in the literature review (Kolodinsky et al., 2018; Wang et al., 2022), who argue that there is no evidence to support the claim that employees' job orientation directly affects their creativity (Amabile & Pratt, 2016; Fetzner & Pratt, 2020).

b) Career

The majority of those who responded thought that the desire for greater social status, power, promotion, and progress at work were the primary drivers of career-oriented behavior and that this behavior was a key factor to employees' creativity. For example, two respondents discussed the positive effects of work being career-oriented on employees' creativity:

Work, or having a job that supports learning and development, gives you autonomy, and enables you to use your abilities, is what a career is all about. The inherent motive to foster employees' creativity is at its core (Respondent 2).

The following statements represent respondent 7's answers that support this opinion:

The relationships between expectations for career advancement, career persistence, and career motivation were that employees who were respected by their coworkers were more motivated to succeed and were also more creative. These workers saw their work as opportunities to fulfill societal obligations, showcase their individual talents, and be self-taught rather than just as a means of making money (respondent 7).

Respondents' opinions on the relationship between career orientation and creativity were consistent with some literature review discussed by Mao & Shen (2020), career orientation takes place when an individual transfers to a job with a higher salary, level, and responsibilities. It is a means of encouraging employees (Haryono et al., 2020). A key component of an organization's success is its culture, which consists of distinct emotions, ideas, and past experiences. It can also be seen as a personal call to action for each person to do something because they want to (Parker-Bell & Osborn, 2023). When people are motivated to work, they will use their creativity to accomplish goals since doing so will satisfy their needs (Khorakian et al., 2021). Scandura (2017) argues that the desire for affiliation, the need for strength, and the need for achievement comprise what drives people to work. The research results of Haryono et al. (2020) highlighted how work motivation is substantially impacted by career orientation.

c) Calling

Employees are encouraged to put forth significant effort in learning new things and gaining advanced abilities, which will allow them to deal with difficulties more effectively and enhance their creativity. In light of this, the following are some examples of how calling might encourage employee creativity:

Employees who have a calling orientation are encouraged to consider issues from the perspectives of others and to seek knowledge. As a result, when evaluating solutions, they will filter out useless

information and come up with unique ideas that are not only novel but also acceptable for addressing the needs of others (Respondent 5).

Calling is crucial for encouraging the creative thinking of workers (Respondent 6).

The desire to help others or make an effort out of compassion for others is known as "calling orientation." It enables workers to see beyond the confines of their own viewpoints, increase their sensitivity to the needs and views of others, and complete tasks as effectively as possible, all of which are essential for inspiring creativity (Respondent 8).

In terms of calling orientation, Lv et al. (2021) argued that calling-oriented employees are more involved in creative work and often devote more time, effort, and resources to their profession in order to learn and master domain and creative abilities and create more adaptable thought processes and in-depth solutions to difficult challenges, which fosters creativity. Employees with a sense of calling are also better able to understand the worth of their work for others or for the business because they care about other people's well-being (Tian et al., 2021). This improves their sense of purpose and self-identity and increases their propensity to look for various solutions to difficulties (Duan et al., 2020; Karatepe & Kim, 2023), demonstrating more tenacity and persistence when trying to solve a problem. Contrarily, Amabile & Pratt (2016) noted that there was no empirical research on the link between calling and creativity that had been reported in the literature. Lv et al. (2021) however, suggest that workers who exhibit calling, meaningful work, and pro social orientation in the workplace are likely to become relatively creative.

6.3 Work environment

Finding out how the institute encourages employees to develop their creativity was the goal of the interview question. Further categorization of the many areas of attention is made possible as a result of the interview question and the interviewees' responses, which mentioned sufficient resources, realistic workload pressure, freedom, challenging work, work group support, managerial encouragement, organizational encouragement, and a lack of organizational impediments. Every participant in the interview agreed that a convenient work environment had a positive impact on employees' creativity. The data show that numerous determinants are among the substantial benefits:

a) Sufficient resources

All responders made it clear that the institute provides specific resources, including funds, materials, facilities, time, and information. They thought that having access to these resources influence the employees' creative thinking. The following are a few examples of responses:

The availability of information sources in the workplace, especially current technologies and the internet, may stimulate creativity (Respondent 8).

By equitably allocating resources, our institute's leaders encourage employee creativity. Time, money, materials, facilities, and information are a few of the most important resources that leaders should appropriately distribute to encourage their employees' creativity (Respondent 1).

The impact of resources on employees' creativity has been the subject of numerous studies (e.g., Balková et al., 2022; Moussa & El Arbi, 2020; Ramos et al., 2018). According to Balková et al. (2022), an individual can be creative and provide unique ideas on their own at work, but the execution of ideas typically depends on the support, resources, and encouragement of others. In their 2018 study, Ramos et al. found a strong relationship between perceived work resources and creativity in the workplace (Ramos et al., 2018). Additionally, the findings of Richards & Duif (2018) argue that having access to plenty of resources is essential for creativity, and they define resources as whatever an organization can use to foster creativity in a particular domain.

b) Realistic workload pressure

From the respondents' perceptions of the realistic workload pressure to complete job tasks and its effect on employees' creativity, a number of positive stories emerged. Here are a few examples of responses:

We don't need to exert extra pressure on aspiring innovators to come up with game-changing ideas. They need time to think, organize, invent, and learn. Additionally, adequate time must be set aside to collaborate with others on idea analysis and testing (Respondent 4).

Employees in charge of creativity activities may experience stress and overwhelm when they must balance their daily tasks with other creative responsibilities, and that can prevent them from becoming creative. In support of this opinion, the following statements were made by respondents:

For thought, investigation, and idea testing, people require time—sometimes a lot of it. Allow workers some reflective time as a reward. When you give workers the opportunity to develop creative solutions, they also need to be trained and given the necessary resources (Respondent 9).

Give creativity the time it needs since it is a vital force for innovation (Respondent 8).

The respondents perceived that realistic workload pressure in the institute leads to a higher level of employees' creativity, which is also consistent with the literature review discussed (Aleksić et al., 2017; Boëne, 2014; Ramos et al., 2018). ElMelegy et al. (2016) argued that due to the lack of time for innovation, task pressures that are too high have a detrimental impact. Employees that are under a lot of workload pressure are more likely to choose straightforward, ineffective, and unoriginal methods. Challenges, on the other hand, should have a positive impact on creativity since they force workers to think creatively and inspire those with creative capacity to do so (Byron et al., 2010; Conradt & Bogner, 2018; Zhou et al., 2023).

c) Freedom

Respondents frequently discuss the need to provide employees with more autonomy and freedom. It is true that flexibility and empowerment have positive effects on employees' creativity. Similar to this, allowing employees creative freedom has some interesting ramifications. The interviewees took note of this when responses 4, 5, and 9 indicated that:

Every organization strives to have a workforce that is highly capable of solving problems. But what characteristics help a worker solve problems effectively? Simple: in order to find solutions to unprecedented problems, creativity and innovation are required. Your employees will feel more confident if you allow them to express their creativity (Respondent 4).

By allowing employees creative freedom, you are demonstrating your confidence in their skills. Additionally, it shows that you are empowering your employees to act differently (Respondent 5).

These results line up with our literature review as well, have shown that freedom is among the work context factors that foster employees' creativity (e.g., Amabile et al., 1996; Javed et al., 2021; Ramos et al., 2018; Tantawy et al., 2021; Tierney & Farmer, 2011). According to Tantawy et al. (2021), having a strong sense of autonomy and self-efficacy among employees encourages more active efforts and creative output. Siregar et al. (2021) stated that autonomy enables employees to try out alternative work techniques and methodologies. Additionally, it enables them to implement new ideas on a modest scale, which helps them uncover new ones and refine them further. Therefore, management should reduce restrictions, criticism, and direction at the workplace in order to give people complete independence. Management should also promote self-determination and encourage employees to come up with new concepts (Kwon & Kim, 2020).

d) Challenging work

During the interview with the directors, it became clear how crucial it is to create environments that are demanding for employees to work in by establishing goals for their creativity, using developmental feedback, and using creative evaluation methods. According to respondents, the challenging work enhances employees' creativity:

I'll say this now: An active coping style and positive feelings are produced through challenging work. Positive effects were observed on institutional outcomes like employee creativity, productivity, and efficiency (Respondent 4).

By coming up with, encouraging, and advancing ideas for changing themselves or the workplace, innovative behaviors might enable workers to improve their capability while facing high working demands (Respondent 6).

The literature has supported the idea that a demanding job satisfies a person's intrinsic needs. A challenging job should motivate people to put in more effort in order to properly handle the demands of the position (Antwi et al., 2019). Kwon & Kim (2020) explained that workers who view their jobs as challenging react with novel ideas and a desire to meet the complex requirements of their jobs, or, in other words, they expend more effort. Siregar et al. (2021) emphasized that employees are more likely to devote more of their cognitive and emotional resources to their work in a tough environment, which typically yields stronger, more fulfilling working experiences. Similar findings were made by ElMelegy et al. (2016), who reported that providing employees with challenging work and supportive guidance has been shown to increase their intrinsic motivation, which results in more productive and creative results.

e) Work group support

According to the respondents, encouragement, support, open communication, and informational feedback from coworkers can have an impact on an employee's creativity. The following statements were made by respondents in support of this opinion:

Our daily lives are deeply influenced by our particular work environment, our team, and what we do there. Therefore, how satisfied employees are with their jobs depends on productivity, the work culture of the team, and how simple it is for them to collaborate and communicate with one another (Respondent 4).

When work groups are supportive of one another and have a variety of backgrounds and viewpoints, they are more likely to be creative (Respondent 9).

Prior studies have agreed that coworkers' support and encouragement can drive employees to be creative. Gu et al. (2018) explained that mutual openness to ideas has been shown to have a prominent impact on creative thinking and may work on creativity by exposing people to a wider range of unique ideas. On the other hand, Kenworthy et al. (2020) argued that social information provided by coworkers is likely to have a significant impact on individual creativity since they are often more akin to the focal person than are the supervisors. In addition, several academics have found that employees' perceptions of their creative roles may be influenced by their coworkers as a salient referent for creativity expectations (Mutonyi et al., 2020). Employees may perceive themselves as creative in this situation and be more willing to take chances, openly explore, and experiment with ideas and techniques if they believe that their coworkers expect them to do so (Wu et al., 2023).

f) Managerial encouragement

The directors' comments highlighted the value of managerial encouragement as a strategic instrument for fostering employee creativity at work, which is also consistent with our review of the relevant literature. All respondents agreed that managerial encouragement is important in the workplace.

As you can see, our institute has an "open door" policy. Because of how our office is set up, we are all encouraged to communicate with one another. With pertinent justifications, decisions made at the top are discussed right away. We invite any ideas that the employees may have. All employees are gathered for a meeting where their ideas are discussed (Respondent 1).

Don't overprescribe remedies to those who are creative. State the problems clearly in a way that makes good strategic sense. Then go, defeat it... get out of the way and let them come up with the best solution (Respondent 7).

Amabile et al. (1996) assert that managerial encouragement is a key factor in determining employees' creativity. To encourage employees' initiative, managers should impose teamwork and organizational maneuvering, identify new ways of working and improve their innovative performance, exploit challenges and risk-taking, encourage exploration of new ideas, recognize individual initiative, and provide constructive feedback (Sözbilir, 2018; Zhang et al., 2020). Furthermore, management encouragement entails establishing precise organizational goals for high levels of creativity within the organization (Lee, 2018). This was supported by Hober et al. (2021), who found that when timely, precise, and effective goals were set, motivation improved.

g) Organizational encouragement

The interview findings suggested that organizational encouragement proved to be the primary factor affecting creativity in the institute. It's enthusiastic to recognize and comprehend this aspect in order to inform changes in management practices and regulatory frameworks for organizations. Because of the importance of organizational encouragement, it is a fundamental to develop rules that recognize and reward creative accomplishments as well as appreciate and respect individuals and groups.

Respondents clarified that strategic direction contributes to employee creativity. For instance, respondent 4 claimed that strategic direction encourages employee creativity and innovation through the process of creating long-term goals and delivering deliberate action on how the goals would be attained.

We work hard to spread the institution's vision to foster a work environment where everyone can actively engage and grow professionally and personally in the pursuit of a common goal.

Responses from the interview indicated that leadership contributes to encouraging and increasing employee creativity and innovation:

We welcome change and promote creativity among our staff members. Making mistakes was considered part of the learning process. We created and put into action a high-performance culture by defining the goals for success, tracking performance, and utilizing alternative work procedures, including job redesign and autonomous work teams (Respondent 5).

I think that to attract and retain creative employees, a good compensation policy is decisive. Everyone is aware that we offer relatively higher pay for employees, and because we offer better benefits and compensation, more people want to work for our institute (Respondent 6).

From the above key decision maker statements, it is clear that organizational support and encouragement result in creative outputs. Reward systems influence employee motivation and creativity within the institute, which findings are in line with the study's literature review (e.g., Ilha & Pina, 2021; Paulus & Nijstad, 2003; Ramos et al., 2018; Sözbilir, 2018). Employee creativity was found to be mostly influenced by organizational encouragement (Ramos et al., 2018). This conclusion supports the authors' claims that employees' creativity is influenced by the encouragement they get (Secundo et al., 2020). Given the significance of organizational encouragement, it is obvious that creating guidelines that value and reward creative results while placing a high degree of trust in both individuals and groups (Ilha & Pina, 2021).

Organizational encouragement for innovation is created by the value that the organization accords to creativity and innovation (Mittal & Dhar, 2015). Organizational encouragement also relates to management's readiness to take a risk, enthusiasm for coming up with new concepts, and interest in providing constructive criticism on concepts. Organizations should encourage, reward, and recognize unique problem-solving approaches that foster creativity and innovation (Lee & Kim, 2021). Kim et al. (2019) found that organizational support and encouragement lead to the development of creative ideas. Liang et al. (2021) confirmed the same conclusions and said that organizational encouragement affects employees' intrinsic motivation, which increases their capacity for creativity.

h) Lack of organizational impediments

The managerial view of the lack of organizational impediments and employee creativity was reflected in several positive examples. Respondent 4 discussed the various methods at work to promote the absence of organizational impediments. This can be achieved by setting up a weekly team outing. The group meets to discuss what has been accomplished and make plans for the tasks to be completed in the upcoming weeks.

It's the kind of meeting where everyone on the team takes full responsibility for both the agenda and the results. It is the ideal time for the team to take a break and consider how they have been working.

The results of the interview also showed that creativity is affected by organizational impediments such as internal political issues, harsh criticism, divisive internal competition, an aversion to risk, and an excessive emphasis on the status quo. Following are some examples of responses:

All of us want success, yet we frequently disagree on what it entails or how to get there. Office politics develops when it becomes challenging to handle these personality and opinion conflicts (Respondent 5).

Keep in mind that certain people will always be in positions of authority superior to others, whether due to a hierarchy or some other source. Although it's normal to desire to use or grow our power, we might do it in a way that deprives others of their strength (Respondent 8).

ElMelegy et al. (2016) suggested that managers must eliminate organizational barriers and establish well-coordinated procedures to foster employees' creativity. Therefore, it is clear that managers must address the routines and tasks that make up the job in their organizations before looking for alternatives to develop challenging tasks that do not hinder employees' intrinsic motivation (Amabile & Pillemer, 2012). Creative team leaders are also necessary to promote creative solutions, effective teamwork, and problem-solving skills (Reiter-Palmon, 2021).

Consequently, some research revealed that uncertainty and ambiguity are hallmarks of a politically charged workplace, where favoritism and self-serving behavior are common (e.g., Ali et al., 2021; Liu et al., 2018; Malik et al., 2019). For example, Malik et al. (2019) found that employees must be on the lookout for other people's actions in workplaces where these norms are prevalent if they want to maintain their reputations and status within the organization. This vigilance drains the employees' affective, cognitive, and physical resources, which results in unfavorable attitudes and behaviors. Consistent with this line of reasoning, Liu et al. (2018) found that perceptions of organizational politics was found to be inversely associated with creative performance.

In addition, a significant body of extant research has found empowerment and autonomy in less rigid institutional structures as antecedents to regularly managing employee creativity (e.g., Cai et al., 2019; Yuan & Woodman, 2021). For example, Cirella (2021) demonstrated that the best course of action for managers is to reevaluate and confront deeply ingrained beliefs. Organizations can do this to liberate themselves from rigidity and stagnation while creating space for new knowledge. The potential for new ideas can then be used to develop new and valuable products, services, and business models (Yuan & Woodman, 2021). Learning and understanding enable firms to quickly adjust to market situations, consumer needs, and trends, especially when placed in a dynamic environment (Klammer et al., 2019).

6.4 Family-work resource spillover

Interviews with the key decision makers revealed that employees experience more positive feelings and are therefore more likely to engage in the creative process when they see that their family supports, encourages, and appreciates their creativity and positively influences their work. A number of positive instances were taken from the managerial perception of family-work resource spillover and workplace creativity. Following are some examples of responses:

Caring affection at home, along with supportive coworkers, formed the ideal environment for me to perform well at my job, which is characterized as coming up with new and helpful ideas at work (Respondent 4).

It had a positive impact on my work performance when I took happiness from home and was supported by coworkers at work (Respondent 6).

Family and friend support positively affects my behavior in the workplace, particularly my creativity (Respondent 9).

On the other hand, respondents also expressed family-to-work conflict and its negative impact on the employees' achievement at work. In support of these opinions, key decision-maker responses were captured in the following statements:

Bad feelings at home can have a negative impact on my creativity, and when I feel excluded from and ignored by my family, I am more affected (Respondent 5).

Family may not always positively influence creativity... feeling excluded by family causes stress, which an employee then takes to work. Because of this, the creative process is less engaged, which ultimately hinders employee creativity (Respondent 7).

Research on the relationship between family and work has long argued that employees' social and family lives outside of work can either improve or worsen their work performance and creativity (Powell et al., 2019). Work and personal life are becoming increasingly intertwined and influencing one another (Madjar, 2021). Additionally, there is some evidence that creative ideas often do not stay in the workplace, and studies show that family can offer the resources, support, and motivation needed to be creative at work (Tang et al., 2017). Previous psychological studies have identified the family as one of the most important factors in transforming the ability to be creative into an actual skill and competence (Greenhaus et al., 2006), and that family relationships may help individuals acquire specific personal characteristics, such as a creative nature or an openness to new things, that may enhance their creativity at work (Lee et al., 2023).

On the other hand, a lot of studies have been focused on the effects of family-to-work conflict on employees' performance at work (e.g., Greenhaus et al., 2006; Madjar, 2021), suggesting that family may not always positively influence creativity. When people perceive that their home situation negatively impacts their ability to work, they attempt to deal with these distressing feelings (Mehta & Dahl, 2019; Powell et al., 2019), and this exertion exhausts their psychological strength (Rothbard, 2001), which could hinder the completion of tasks, especially creative activities.

7. Conclusion

The details of the qualitative findings obtained from key decision-makers in the EIAR were described. There were nine key informants from directors, directorates, research center directors, and the support directorate. The main theme concerning creativity in the EIAR was the focus. The semi-structured interview questions were divided into various major key themes of determinants that influence employees' creativity in the EIAR. Interviews with decision-makers have provided the objectives of the qualitative study design. Because there has been little research on creativity in the EIAR, the findings of the semi-structured interview provided a more detailed description of creativity in the EIAR. The main contribution of this study is considered to be the following important conclusions:

First, the previous studies conducted in the organizational context focused mainly on work context factors that influenced employees' creativity (Binyamin & Carmeli, 2017; El-Kassar et al., 2022; Yoo et al., 2019) and individual-related variables (Emami et al., 2022; Mack & Landau, 2015). The findings of this research support the applicability of Amabile & Pratt's (2016) dynamic componential model of creativity and innovation in organizations: individual components and work environment determinants affect employees' creativity.

Second, the contribution of the interviews was that determinants of work orientation, such as job, career and calling, influence employees' creativity which is also consistent with the literature review

discussed (Haryono et al., 2020; Khorakian et al., 2021; Lv et al., 2021). As a result, this must be explained further in the EIAR. This contribution overcomes the arguments of Amabile & Pratt (2016) that there is no evidence to support that employees' work orientation directly affects their creativity.

Third, the interviews' contribution included a dimension outside of the organizations, such as family-work resource spillover, which also influences employees' creativity. Consequently, more explanation of this is required in the EIAR. This contribution overcomes the limitation of Amabile's (1988) theory, which does not consider the influence of determinants outside the organization on employees' creativity. However, a few external determinants were different: sets of values and norms (the culture and tolerance of the community), institutional support (the educational system and public investment in education and research), and government regulation and incentives. In this research, the external determinant was family-work resource spillover.

Appendix A. Interview protocol

No.	Question	Source
1	What about your resume? (The respondents' background, demographics, and position in the organization).	
2	In the context of your organization, what is "creativity?"	Martins and Terblanche (2003), Paulus and Dzindolet (2008)
3	In the context of your organization, is creativity important and why?	(Serrat, 2017a)
4	In the context of your organization, what do you mean by "innovation"?	Martins and Terblanche (2003), Paulus and Dzindolet (2008)
5	In your opinion, what is the relationship between creativity and innovation?	Alves et al. (2007); Çokpekin and Knudsen (2012), Zhou and Hoever (2014)
6	Are individual creative traits more favorable to the act and result of creativity?	Amabile et al., 2005, Csikszentmihalyi, 2011, Sternberg and Lubart, 1995).
7	In your opinion, what is the relationship between work orientation and employees, creativity?	Willner et al. (2020)
8	What type of support is made available to the employees' to enhance their creativity? (Probe: How do supervisory support, peer support, and work conditions influence employees' creativity?)	Siegel and Kaemmerer (1978), Amabile et al. (1996), Isaksen et al. (2000–2001), Martins and Terblanche (2003), Zdunczyk and Blenkinsopp (2007)
9	Is there a resource spillover between family and work that boosts employees' creativity at work?	Tang et al. (2017)
10	Are there any barriers to creativity at work? If so, what are they? How are you addressing these challenges?	Amabile et al. (1996), Isaksen et al.(2001), Sadi and Al-Dubaisi (2008), Ohly and Fritz (2010), Walter (2012)
11	Are there any relevant factors you would like to add that we might not have covered?	

Appendix B: A deductive thematic analysis

Key Themes	Organizing Themes		Codes
	Sub-Theme	Sub-Sub Theme	
Determinants that Influence Employees' Creativity in the EIAR	Individual components	creative-self efficacy	Knowledge, skill, talent
		Creativity-relevant skills	Cognitive style, thinking skill
		Intrinsic task motivation	Interest, satisfaction, enjoy-ability
	Work orientation	Job	Financial compensation
		Career	Power, promotion
		Calling	Helping the society
	Work context	Sufficient resources	Fund, materials, information
		Realistic work load pressure	Time pressure
		Freedom	Autonomy, freedom, flexibility
		Challenging work	Environments that are demanding for employees to work
Encouragement, support, open communication, and informational feedback from coworkers			
Work group support		Encourage exploration of new ideas, recognize individual initiative, and provide constructive feedback	
Managerial encouragement		Policies that acknowledge and reward creative results, appreciating and respecting individuals and groups	
Organizational encouragement	Eliminate organizational barriers and establish well-coordinated procedures		
Social Factors	Family-work resource spillover	---	Family supports, encourages, and appreciation

References

- *Aleksić, D., Mihelič, K. K., Černe, M., & Škerlavaj, M. (2017). Interactive effects of perceived time pressure, satisfaction with work-family balance (SWFB), and leader-member exchange (LMX) on creativity. Personnel Review.*
- *Ali, A., Zhang, Z., & Aman, N. (2021). Game of organizational politics leading to turnover intention. Khushk, AA, Zengtian, Z., & Aman, 2021, 35–49.*
- *Alston, J. M. (2010). The Benefits from Agricultural Research and Development, Innovation, and Productivity Growth. Oecd, 31, 27.*

- Amabile, T. (1988). *Amabile_A_Model_of_CreativityOrg.Beh_v10_pp123-167.pdf*. In *Research in Organizational Behavior* (Vol. 10, pp. 123–167).
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154–1184.
- Amabile, T. M., & Pillemer, J. (2012). Perspectives on the social psychology of creativity. *Journal of Creative Behavior*, 46(1), 3–15.
- Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior*, 36, 157–183.
- Anderson, N., Potočník, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297–1333.
- Antwi, C. O., Fan, C., Aboagye, M. O., Brobbey, P., Jababu, Y., Affum-Osei, E., & Avornyo, P. (2019). Job demand stressors and employees' creativity: A within-person approach to dealing with hindrance and challenge stressors at the airport environment. *The Service Industries Journal*, 39(3–4), 250–278.
- Appu, A. V., & Sia, S. K. (2017). Creativity at workplace: Role of self-efficacy and harmonious passion. *International Journal of Human Resources Development and Management*, 17(3–4), 205–219.
- Baer, M. (2012). Putting creativity to work: the implementation of creative ideas in organizations Author (s): MARKUS BAER Source : *The Academy of Management Journal* , Vol . 55 , No . 5 (October 2012) , pp . 1102-1119 Published by : Academy of Management Stable URL : *The Academy of Management Journal*, 55(5), 1102–1119.
- Balková, M., Lejsková, P., & Ližbetinová, L. (2022). The Values Supporting the Creativity of Employees. *Frontiers in Psychology*, 12(February), 1–10.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1996). *Habits of the heart: individualism and commitment in American life: updated edition with a new introduction*. Univ of California Press.
- Binyamin, G., & Carmeli, A. (2017). Fostering members' creativity in teams: The role of structuring of human resource management processes. *Psychology of Aesthetics, Creativity, and the Arts*, 11(1), 18–33.
- Birdi, K., Leach, D., & Magadley, W. (2016). The Relationship of Individual Capabilities and Environmental Support with Different Facets of Designers' Innovative Behavior. *Journal of Product Innovation Management*, 33(1), 19–35.
- Boënné, M. (2014). Fostering Creativity in the Organization structures on the creativity of inventors Creativity in the Organization Which management instruments and organizational.
- Byron, K., Khazanachi, S., & Nazarian, D. (2010). The relationship between stressors and creativity: a meta-analysis examining competing theoretical models. *Journal of Applied Psychology*, 95(1), 201.
- Cai, W., Lysova, E. I., Bossink, B. A. G., Khapova, S. N., & Wang, W. (2019). Psychological capital and self-reported employee creativity: The moderating role of supervisor support and job characteristics. *Creativity and Innovation Management*, 28(1), 30–41.
- Cai, W., Lysova, E. I., Khapova, S. N., & Bossink, B. A. G. (2018). Servant leadership and innovative work behavior in Chinese high-tech firms: A moderated mediation model of meaningful work and job autonomy. *Frontiers in Psychology*, 9(OCT), 1–13.
- Carlson, D. S., Thompson, M. J., Crawford, W. S., & Kacmar, K. M. (2019). Spillover and crossover of work resources: A test of the positive flow of resources through work–family enrichment. *Journal of Organizational Behavior*, 40(6), 709–722.
- Chan, X. W., Kalliath, P., Chan, C., & Kalliath, T. (2020). How does family support facilitate job satisfaction? Investigating the chain mediating effects of work–family enrichment and job-related well-being. *Stress and Health*, 36(1), 97–104.
- Cho, Y., & Jiang, W. Y. (2021). If you do what you love, will the money follow? How work orientation

impacts objective career outcomes via managerial (mis) perceptions. Academy of Management Journal, ja.

- Christiaensen, L., Demery, L., & Köhl, J. (2006). *The Role of Agriculture in Poverty Reduction An Empirical Perspective. World Bank Research Observer, June 2014, 49–55.*
- Cirella, S. (2021). *Managing collective creativity: Organizational variables to support creative teamwork. European Management Review, 18(4), 404–417.*
- Conradt, C., & Bogner, F. X. (2018). *From STEM to STEAM: How to monitor creativity. Creativity Research Journal, 30(3), 233–240.*
- Council, I. (2004). *Inventing a better future. A Strategy for Building World Wide Capacities in Science and Technology. IAC, The Netherlands.*
- Cucuzzella, C. (2016). *Creativity, sustainable design and risk management. Journal of Cleaner Production, 135, 1548–1558.*
- Davis, M. A. (2009). *Understanding the relationship between mood and creativity: A meta-analysis. Organizational Behavior and Human Decision Processes, 108(1), 25–38.*
- Du, D., Derks, D., & Bakker, A. B. (2018). *Daily spillover from family to work: A test of the work–home resources model. Journal of Occupational Health Psychology, 23(2), 237.*
- Duan, W., Tang, X., Li, Y., Cheng, X., & Zhang, H. (2020). *Perceived Organizational Support and Employee Creativity: The Mediation Role of Calling. Creativity Research Journal, 32(4), 403–411.*
- Duarte Alonso, A., Sakellarios, N., Alexander, N., & O'Brien, S. (2018). *Strengths, innovation, and opportunities in a burgeoning industry: an exploratory study. Asia Pacific Journal of Marketing and Logistics, 30(2), 276–296. <https://doi.org/10.1108/APJML-05-2017-0105>*
- El-Kassar, A.-N., Dagher, G. K., Lythreatis, S., & Azakir, M. (2022). *Antecedents and consequences of knowledge hiding: The roles of HR practices, organizational support for creativity, creativity, innovative work behavior, and task performance. Journal of Business Research, 140, 1–10.*
- ElMelegy, A. R., Mohiuddin, Q., Boronico, J., & Maasher, A. A. (2016). *Fostering Creativity in Creative Environments: An Empirical Study of Saudi Architectural Firms. Contemporary Management Research, 12(1), 89–120.*
- Emami, M., Rezaei, S., Valaei, N., & Gardener, J. (2022). *Creativity mindset as the organizational capability: the role of creativity-relevant processes, domain-relevant skills and intrinsic task motivation. Asia-Pacific Journal of Business Administration.*
- Family, G. (2003). *Collective creativity: A complex solution for the complex problem of the state of our planet. Creativity Research Journal, 15(1), 83–90.*
- Ferreira, J., Coelho, A., & Moutinho, L. (2020). *Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. Technovation, 92–93(February 2017), 0–1.*
- Fischer, C., Malycha, C. P., & Schafmann, E. (2019). *The influence of intrinsic motivation and synergistic extrinsic motivators on creativity and innovation. Frontiers in Psychology, 10(FEB), 1–15.*
- Fuchs, M., Fossgard, K., Stensland, S., & Chekalina, T. (2021). *Creativity and innovation in nature-based tourism: a critical reflection and empirical assessment. In Nordic Perspectives on Nature-based Tourism.*
- Füzi, A., Clifton, N., & Loudon, G. (2022). *New in-house organizational spaces that support creativity and innovation: the co-working space.*
- Ghosh, D., Sekiguchi, T., & Fujimoto, Y. (2020). *Psychological detachment: A creativity perspective on the link between intrinsic motivation and employee engagement. Personnel Review, 49(9), 1789–1804.*
- Gil, E. C., Albarrán, E. M., Minucci, E., Nüssle, G., Padolski, S., Petrov, P., Szilasi, N., Velghe, B., Georgiev, G., & Kozhuharov, V. (2017). *The Beam and detector of the NA62 experiment at CERN. Journal of Instrumentation, 12(05), P05025.*
- Grant, A. M., & Berry, J. W. (2011). *The necessity of others is the mother of invention: Intrinsic and*

- prosocial motivations, perspective taking, and creativity. *Academy of Management Journal*, 54(1), 73–96.
- Green, P. I., Finkel, E. J., Fitzsimons, G. M., & Gino, F. (2017). The energizing nature of work engagement: Toward a new need-based theory of work motivation. *Research in Organizational Behavior*, 37, 1–18.
 - Greenhaus, J. H., Powell, G. N., Greenhaus, J. H., & Powell, G. N. (2006). *When Work and Family Are Allies : A Theory of Work-Family Enrichment* Published by : Academy of Management Linked references are available on JSTOR for this article : when work and family are allies : a theory of work-family enrichment. *The Academy of Management Review*, 31(1), 72–92.
 - Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work–family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, 5(1), 111.
 - Gu, J., Wang, G., Liu, H., Song, D., & He, C. (2018). Linking authoritarian leadership to employee creativity: The influences of leader–member exchange, team identification and power distance. *Chinese Management Studies*, 12(2), 384–406.
 - Guo, J., Zhang, J., & Pang, W. (2021). Parental warmth, rejection, and creativity: The mediating roles of openness and dark personality traits. *Personality and Individual Differences*, 168, 110369.
 - Hanikel, N., Prévot, M. S., Fathieh, F., Kapustin, E. A., Lyu, H., Wang, H., Diercks, N. J., Glover, T. G., & Yaghi, O. M. (2019). Rapid Cycling and Exceptional Yield in a Metal-Organic Framework Water Harvester. *ACS Central Science*, 5(10), 1699–1706.
 - Hanson, G. C., Hammer, L. B., & Colton, C. L. (2006). Development and validation of a multidimensional scale of perceived work-family positive spillover. *Journal of Occupational Health Psychology*, 11(3), 249.
 - Haryono, S., Supardi, S., & Udin, U. (2020). The effect of training and job promotion on work motivation and its implications on job performance: Evidence from Indonesia. *Management Science Letters*, 10(9), 2107–2112. <https://doi.org/10.5267/j.msl.2020.1.019>
 - Hober, B., Schaarschmidt, M., & von Korfflesch, H. (2021). Internal idea contests: Work environment perceptions and the moderating role of power distance. *Journal of Innovation & Knowledge*, 6(1), 1–10.
 - Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6(4), 307–324.
 - Hong, J., Hou, B., Zhu, K., & Marinova, D. (2018). Exploratory innovation, exploitative innovation and employee creativity: The moderation of collectivism in Chinese context. *Chinese Management Studies*, 12(2), 268–286.
 - Houghton, J. D., & Dawley, D. (2015). *Narrowing the Creativity Gap : The Moderating Effects of Perceived Support for Creativity*. March 2011.
 - Ilha Villanova, A. L., & Pina e Cunha, M. (2021). Everyday creativity: A systematic literature review. *The Journal of Creative Behavior*, 55(3), 673–695.
 - Javed, B., Fatima, T., Khan, A. K., & Bashir, S. (2021). Impact of inclusive leadership on innovative work behavior: the role of creative self-efficacy. *The Journal of Creative Behavior*, 55(3), 769–782.
 - Kann, L., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., Queen, B., Lowry, R., Chyen, D., Whittle, L., & Thornton, J. (2018). Youth risk behavior surveillance—United States, 2017. *MMWR Surveillance Summaries*, 67(8), 1.
 - Kapadia, C., & Melwani, S. (2021). More tasks, more ideas: The positive spillover effects of multitasking on subsequent creativity. *Journal of Applied Psychology*, 106(4), 542.
 - Karami, S., & Henshon, S. E. (2023). Creativity in Motion: An Interview With Sareh Karami. *Roeper Review*, 45(1), 3–5.
 - Karatepe, O. M., & Kim, T. T. (2023). Job crafting and critical work-related performance outcomes among cabin attendants: Sequential mediation impacts of calling orientation and work engagement. *Tourism Management Perspectives*, 45, 101065.
 - Kaufmann, R. von. (2007). *Integrated Agricultural Research for Development: contributing to the*

Comprehensive Africa Agricultural Development Programme (IAR4D in CAADP). Advances in Integrated Soil Fertility Management in Sub-Saharan Africa: Challenges and Opportunities, 63–73.

- Kenworthy, J. B., Marusich, L. R., Paulus, P. B., Abellanoza, A., & Bakdash, J. Z. (2020). *The impact of top performers in creative groups. Psychology of Aesthetics, Creativity, and the Arts.*
- Khorakian, A., Baregheh, A., Eslami, G., Yazdani, N., Maharati, Y., & Jahangir, M. (2021). *Creativity and paternalistic leadership in a developing country's restaurants: The role of job embeddedness and career stage. International Journal of Tourism Research, 23(4), 677–689.*
- Kiger, M. E., & Varpio, L. (2020). *Thematic analysis of qualitative data: AMEE Guide No. 131. Medical Teacher, 42(8), 846–854.*
- Kim, B.-J., Park, S., & Kim, T.-H. (2019). *The effect of transformational leadership on team creativity: Sequential mediating effect of employee's psychological safety and creativity. Asian Journal of Technology Innovation, 27(1), 90–107.*
- Klammer, A., Grisold, T., & Gueldenberg, S. (2019). *Introducing a 'stop-doing' culture: How to free your organization from rigidity. Business Horizons, 62(4), 451–458.*
- Kolodinsky, R. W., Ritchie, W. J., & Kuna, W. A. (2018). *Meaningful engagement: Impacts of a "calling" work orientation and perceived leadership support. Journal of Management and Organization, 24(3), 406–423.*
- Koseoglu, G., Liu, Y., & Shalley, C. E. (2017). *Working with creative leaders: Exploring the relationship between supervisors' and subordinates' creativity. Leadership Quarterly, 28(6), 798–811.*
- Kršlak, S. Š., & Ljevo, N. (2021). *Organizational Creativity in the Function of Improving the Competitive Advantage of Tourism Companies in Bosnia and Herzegovina. Journal of Advanced Research in Economics and Administrative Sciences, 2(1), 81–91.*
- Kwon, K., & Kim, T. (2020). *An integrative literature review of employee engagement and innovative behavior: Revisiting the JD-R model. Human Resource Management Review, 30(2), 100704.*
- Lee, C., Hallak, R., & Sardeshmukh, S. R. (2019). *Creativity and innovation in the restaurant sector: Supply-side processes and barriers to implementation. Tourism Management Perspectives, 31(March), 54–62.*
- Lee, J. Y. (2018). *The effects of job characteristics on the team creativity of distribution companies: Moderating effects of transformational leadership. The Journal of Asian Finance, Economics and Business, 5(4), 161–172.*
- Lee, T., O'Mahony, L., & Lebeck, P. (2023). *Understanding the Creative Process. In Creativity and Innovation: Everyday Dynamics and Practice (pp. 13–48). Springer.*
- Lee, Y., & Kim, J. (2021). *Cultivating employee creativity through strategic internal communication: The role of leadership, symmetry, and feedback seeking behaviors. Public Relations Review, 47(1), 101998.*
- Lester, J. N., Cho, Y., & Lochmiller, C. R. (2020). *Learning to Do Qualitative Data Analysis: A Starting Point. Human Resource Development Review, 19(1), 94–106.*
- Li, J., Xia, J., & Zajac, E. J. (2018). *On the duality of political and economic stakeholder influence on firm innovation performance: Theory and evidence from Chinese firms. Strategic Management Journal, 39(1), 193–216.*
- Liang, B., van Knippenberg, D., & Gu, Q. (2021). *A cross-level model of shared leadership, meaning, and individual creativity. Journal of Organizational Behavior, 42(1), 68–83.*
- Lin, S.-H. J., Chang, C.-H. D., Lee, H. W., & Johnson, R. E. (2021). *Positive family events facilitate effective leader behaviors at work: A within-individual investigation of family-work enrichment. Journal of Applied Psychology, 106(9), 1412.*
- Liu, D., Gong, Y., Zhou, J., & Huang, J.-C. (2017). *Human Resource Systems, Employee Creativity, and Firm Innovation: The Moderating Role of Firm Ownership Georgia Institute of Technology The Hong Kong University of Science and Technology Jia-Chi Huang. Academy of Management Journal, 60(3), 1164–1188.*

- Liu, D., Jiang, K., Shalley, C. E., Keem, S., & Zhou, J. (2016). *Motivational mechanisms of employee creativity: A meta-analytic examination and theoretical extension of the creativity literature. Organizational Behavior and Human Decision Processes*, 137, 236–263.
- Liu, W., Zhao, S., Shi, L., Zhang, Z., Liu, X., Li, L. I., Duan, X., Li, G., Lou, F., & Jia, X. (2018). *Workplace violence, job satisfaction, burnout, perceived organisational support and their effects on turnover intention among Chinese nurses in tertiary hospitals: a cross-sectional study. BMJ Open*, 8(6), e019525.
- Liv, H., Xing, Z., Min, Y., & Liu, G. (2020). *Everyone is Creative? Research on the Relationship Between the Work Orientation and Employee Creativity. DEStech Transactions on Social Science, Education and Human Science*, ssme, 514–524.
- Lochmiller, C. R., & Lester, J. N. (2015). *An introduction to educational research: Connecting methods to practice. Sage Publications*.
- Lozano, R. (2014). *Creativity and organizational learning as means to foster sustainability. Sustainable Development*, 22(3), 205–216.
- Lv, J., Chen, W., & Ruan, Y. (2021). *The Impact of Calling on Employee Creativity: Evidence From Internet Companies. Frontiers in Psychology*, 12(November), 1–8.
- Mack, T., & Landau, C. (2015). *Winners, losers, and deniers: Self-selection in crowd innovation contests and the roles of motivation, creativity, and skills. Journal of Engineering and Technology Management - JET-M*, 37, 52–64.
- Madjar, N. (2021). *Family and its influences on work creativity. Handbook of Research on Creativity and Innovation*, 181–203.
- Madjar, N., Oldham, G. R., & Pratt, M. G. (2002). *There's No Place like Home? The Contributions of Work and Nonwork Creativity Support to Employees' Creative Performance. Academy of Management Journal*, 45(4), 757–767.
- Malek, S. L., Sarin, S., & Haon, C. (2020). *Extrinsic Rewards, Intrinsic Motivation, and New Product Development Performance. Journal of Product Innovation Management*, 37(6), 528–551.
- Malik, M. A. R., Choi, J. N., & Butt, A. N. (2019). *Distinct effects of intrinsic motivation and extrinsic rewards on radical and incremental creativity: The moderating role of goal orientations. Journal of Organizational Behavior*, 40(9–10), 1013–1026.
- Malik, O. F., Shahzad, A., Raziq, M. M., Khan, M. M., Yusaf, S., & Khan, A. (2019). *Perceptions of organizational politics, knowledge hiding, and employee creativity: The moderating role of professional commitment. Personality and Individual Differences*, 142(May), 232–237.
- Mao, J., & Shen, Y. (2020). *Identity as career capital: enhancing employability in the creative industries and beyond. Career Development International*.
- Martins, E., & Martins, N. (2002). *An organisational culture model to promote creativity and innovation. SA Journal of Industrial Psychology*, 28(4), 58–65.
- McIntyre, P. (2009). *Rethinking Communication, Creativity and Cultural Production: Outlining Issues for Media Practice. July*, 156–172.
- McKersie, S. J., Matthews, R. A., Smith, C. E., Barratt, C. L., & Hill, R. T. (2019). *A process model linking family-supportive supervision to employee creativity. Journal of Occupational and Organizational Psychology*, 92(4), 707–735.
- Mehta, R., & Dahl, D. W. (2019). *Creativity: Past, present, and future. Consumer Psychology Review*, 2(1), 30–49.
- Mitchell, I. K., & Walinga, J. (2017). *The creative imperative: The role of creativity, creative problem solving and insight as key drivers for sustainability. Journal of Cleaner Production*, 140, 1872–1884.
- Mittal, S., & Dhar, R. L. (2015). *Transformational leadership and employee creativity: mediating role of creative self-efficacy and moderating role of knowledge sharing. Management Decision*.
- Moussa, N. Ben, & El Arbi, R. (2020). *The impact of Human Resources Information Systems on individual*

innovation capability in Tunisian companies: The moderating role of affective commitment. European Research on Management and Business Economics, 26(1), 18–25.

- Murray, C. J. L., Abraham, J., Ali, M. K., Alvarado, M., Atkinson, C., Baddour, L. M., Bartels, D. H., Benjamin, E. J., Bhalla, K., & Birbeck, G. (2013). *The state of US health, 1990-2010: burden of diseases, injuries, and risk factors. Jama, 310(6), 591–606.*
- Mutonyi, B. R., Slåtten, T., & Lien, G. (2020). *Organizational climate and creative performance in the public sector. European Business Review, 32(4), 615–631.*
- Nightingale, S., Spiby, H., Sheen, K., & Slade, P. (2018). *LJMU Research Online m. Tourism Recreation Research, 19.*
- O’Shea, D., & Buckley, F. (2007). *Towards an integrative model of creativity and innovation in organisations: A psychological perspective. The Irish Journal of Psychology, 28(3–4), 101–128.*
- Oltmann, S. (2016). *Qualitative interviews: A methodological discussion of the interviewer and respondent contexts. Forum: Qualitative Social Research, 17(2), 1–16.*
- Oluwafemi, A., Xulu, S., Dlamini, N., Luthuli, M., Mhlongo, T., Herbst, C., Shahmanesh, M., & Seeley, J. (2021). *Transcription as a Key Phase of Data Analysis in Qualitative Research: Experience from KwaZulu-Natal, South Africa. Field Methods, 33(4), 417–423.*
- Oussi, R., & Chtourou, W. (2020). *Social capital dimensions and employee creativity: Does cognitive style matter? Competitiveness Review, 30(1), 4–21.*
- Parker-Bell, B., & Osborn, D. (2023). *Art Therapy and Career Counseling: Creative Strategies for Career Development Across the Lifespan. Taylor & Francis.*
- Paulus, P. B., & Nijstad, B. A. (2003). *Group creativity: Innovation through collaboration. Oxford University Press.*
- Pocketbook, F. A. O. S. (2015). *World food and agriculture. FAO Rome Italy.*
- Politis, J. D. (2005). *Dispersed leadership predictor of the work environment for creativity and productivity. European Journal of Innovation Management, 8(2), 182–204.*
- Popescu, C. R. G. (2022). *Fostering Creativity in Business: Empowering Strong Transformational Leaders. In Handbook of Research on Changing Dynamics in Responsible and Sustainable Business in the Post-COVID-19 Era (pp. 349–381). IGI Global.*
- Powell, G. N., Greenhaus, J. H., Allen, T. D., & Johnson, R. E. (2019). *Advancing and expanding work-life theory from multiple perspectives. Academy of Management Review, 44(1), 54–71.*
- Pratt, M. G., Pradies, C., & Lepisto, D. A. (2013). *Doing well, doing good, and doing with: Organizational practices for effectively cultivating meaningful work. In Purpose and meaning in the workplace.*
- Ramos, M. A. W., Figueiredo, P. S., & Pereira-Guzzo, C. (2018). *Antecedents of innovation in industry. Innovation & Management Review, 15(3), 269–285.*
- Reiter-Palmon, R. (2021). *Leading for team creativity: Managing people and processes. In Creative Success in Teams (pp. 33–54). Elsevier.*
- Renkow, M., & Byerlee, D. (2010). *The impacts of CGIAR research: A review of recent evidence. Food Policy, 35(5), 391–402.*
- Repository, Z. O., & Library, M. (2021). *Running head: Supervisor emotional intelligence Supervisor emotionally intelligent behavior and employee creativity Zorana Ivcevic Yale Center for Emotional Intelligence, Yale University Julia Moeller University of Leipzig Jochen Menges University of Zu. 55, 79–91.*
- Richards, G., & Duif, L. (2018). *Small cities with big dreams: Creative placemaking and branding strategies. Routledge.*
- Rothbard, N. P. (2001). *Enriching or Depleting? The Dynamics of Engagement in Work and Family Roles Author (s): Nancy P. Rothbard Published by: Sage Publications, Inc. on behalf of the Johnson Graduate School of Management, Cornell University Stable URL.*

- Scandura, T. A. (2017). *Essentials of organizational behavior: An evidence-based approach*. Sage publications.
- Schleiermacher, F., & Bernofsky, S. (2021). *On the different methods of translating*. In *The translation studies reader* (pp. 51–71). Routledge.
- Secundo, G., Del Vecchio, P., Simeone, L., & Schiuma, G. (2020). *Creativity and stakeholders' engagement in open innovation: Design for knowledge translation in technology-intensive enterprises*. *Journal of Business Research*, 119, 272–282.
- Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). *The effects of personal and contextual characteristics on creativity: Where should we go from here?* *Journal of Management*, 30(6), 933–958.
- Shively, K., Stith, K. M., & Rubenstein, L. D. V. (2018). *Measuring What Matters: Assessing Creativity, Critical Thinking, and the Design Process*. *Gifted Child Today*, 41(3), 149–158.
- Siregar, Z. M. E., Sujana, F. R., Pranowo, A. S., & Supriadi, Y. N. (2021). *Job autonomy and innovative work behavior of marketing employees in the automotive industry in Indonesia: The mediating role of organizational commitment*. *Quality - Access to Success*, 22(180), 97–102.
- Siyal, S., Xin, C., Umrani, W. A., Fatima, S., & Pal, D. (2021). *How Do Leaders Influence Innovation and Creativity in Employees? The Mediating Role of Intrinsic Motivation*. *Administration and Society*, 53(9), 1337–1361.
- Skjott Linneberg, M., & Korsgaard, S. (2019). *Coding qualitative data: a synthesis guiding the novice*. *Qualitative Research Journal*, 19(3), 259–270.
- Sonnentag, S., Eck, K., Fritz, C., & Kühnel, J. (2020). *Morning reattachment to work and work engagement during the day: A look at day-level mediators*. *Journal of Management*, 46(8), 1408–1435.
- Sözbilir, F. (2018). *The interaction between social capital, creativity and efficiency in organizations*. *Thinking Skills and Creativity*, 27(December 2017), 92–100.
- Suifan, T. S., Abdallah, A. B., & Al Janini, M. (2018). *The impact of transformational leadership on employees' creativity: The mediating role of perceived organizational support*. *Management Research Review*, 41(1), 113–132.
- Tang, Y., Huang, X., & Wang, Y. (2017). *Good marriage at home, creativity at work: Family–work enrichment effect on workplace creativity*. *Journal of Organizational Behavior*, 38(5), 749–766.
- Tanjung, H., Handoko, Y., Tanjung, I. S., & Yuniarsa, S. O. (2022). *Creativity and innovation in small business: a digital system literature review with round map new normal*. *Proceeding International Seminar of Islamic Studies*, 3(1), 795–802.
- Tantawy, M., Herbert, K., McNally, J. J., Mengel, T., Piperopoulos, P., & Foord, D. (2021). *Bringing creativity back to entrepreneurship education: Creative self-efficacy, creative process engagement, and entrepreneurial intentions*. *Journal of Business Venturing Insights*, 15.
- Thornton, P. K., Schuetz, T., Förch, W., Cramer, L., Abreu, D., Vermeulen, S., & Campbell, B. M. (2017). *Responding to global change: A theory of change approach to making agricultural research for development outcome-based*. *Agricultural Systems*, 152, 145–153.
- Thornton, Philip K., Ericksen, P. J., Herrero, M., & Challinor, A. J. (2014). *Climate variability and vulnerability to climate change: A review*. *Global Change Biology*, 20(11), 3313–3328.
- Tian, X., Peng, X., & Peng, X. (2021). *Influence of prosocial motivation on employee creativity: the moderating role of regulatory focus and the mediating role of knowledge sharing*. *Frontiers in Psychology*, 3880.
- Tierney, P., & Farmer, S. M. (2011). *Creative Self-Efficacy Development and Creative Performance Over Time*. *Journal of Applied Psychology*, 96(2), 277–293.
- Waha, K., van Wijk, M. T., Fritz, S., See, L., Thornton, P. K., Wichern, J., & Herrero, M. (2018). *Agricultural diversification as an important strategy for achieving food security in Africa*. *Global Change Biology*, 24(8), 3390–3400.

- Wang, W., Kang, S. W., & Choi, S. B. (2022). *Servant Leadership and Creativity: A Study of the Sequential Mediating Roles of Psychological Safety and Employee Well-Being*. *Frontiers in Psychology*, 12(February), 1–13.
- Woodman, R. W. (1993a). *Toward a Theory of Organizational Creativity* Author (s): Richard W . Woodman , John E . Sawyer and Ricky W . Griffin Published by : Academy of Management: *The Academy of Management Review*, 18(2), 293–321.
- Woodman, R. W. (1993b). *Toward a Theory of Organizational Creativity* Author (s): Richard W . Woodman , John E . Sawyer and Ricky W . Griffin Source : *The Academy of Management Review* , Vol . 18 , No . 2 (Apr . , 1993) , pp . 293-321 Published by : Academy of Management Stable. *Academy of Management*, 18(2), 293–321.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). *Jobs, Careers, and Callings: People's Relations to Their Work*. *Journal of Research in Personality*, 31(1), 21–33.
- Wu, C.-M., Chen, T.-J., & Wang, Y.-C. (2023). *Formation of hotel employees' service innovation performance: Mechanism of thriving at work and change-oriented organizational citizenship behavior*. *Journal of Hospitality and Tourism Management*, 54, 178–187.
- Wu, C. H., Parker, S. K., & de Jong, J. P. J. (2014). *Need for Cognition as an Antecedent of Individual Innovation Behavior*. *Journal of Management*, 40(6), 1511–1534.
- Xinbo, W. (2018). *China in search of a liberal partnership international order*. *International Affairs*, 94(5), 995–1018.
- Yoo, S., Jang, S., Ho, Y., Seo, J., & Yoo, M. H. (2019). *Fostering workplace creativity: examining the roles of job design and organizational context*. *Asia Pacific Journal of Human Resources*, 57(2), 127–149.
- Yuan, F., & Woodman, R. W. (2021). *The multiple ways of behaving creatively in the workplace: a typology and model*. *Journal of Organizational Behavior*, 42(1), 20–33.
- Zhang, H., Li, F., & Reynolds, K. J. (2020). *Creativity at work: exploring role identity, organizational climate and creative team mindset*. *Current Psychology*, 1–8.
- Zhang, Y., Yang, X., Sun, X., & Kaiser, G. (2023). *The reciprocal relationship among Chinese senior secondary students' intrinsic and extrinsic motivation and cognitive engagement in learning mathematics: a three-wave longitudinal study*. *ZDM - Mathematics Education*, 0123456789.
- Zhou, J., & George, J. M. (2003). *Awakening employee creativity: The role of leader emotional intelligence*. *Leadership Quarterly*, 14(4–5), 545–568.
- Zhou, Y., Zheng, G., Liu, G., & Zhang, Z. (2023). *Complementary effects of high-performance work systems and temporal leadership on employee creativity: a social embeddedness perspective of thriving*. *Asia Pacific Journal of Human Resources*.