

Knowledge Management and Motivation Management: Important Constituents of Firm Performance

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Abstract: In the current research stream, empirical work regarding knowledge and motivation management along their dimensions is sparse. This study partially filled this void by investigating the influence of knowledge management (tacit and explicit) and motivation management (intrinsic and extrinsic) on firm performance with the mediating effects of innovative performance. Based on the quantitative research method, data were collected through questionnaires using the convenience sampling method from 284 employees working in 18 different firms across the citrus industry located in the Sargodha region (Pakistan). The proposed relationships were tested through regression analysis, while mediation relations were analyzed through Hayes' PROCESS Model 4 technique. The results suggested that knowledge and motivation management have a significant positive impact on innovative performance. In addition, the role of innovative performance as a mediator is affirmed in both cases. From a managerial and theoretical perspective, the study's findings are vital as some of the important constituents of firm performance have been highlighted. For academicians, the unique (mediating) position of innovative performance along with dimensions of motivation and knowledge management, are highlighted. Furthermore, for managers, it is suggested that adoption of Knowledge Management and Motivation Management systems have a greater impact on employees' innovative performance, subsequently improving firm performance.

Keywords: Knowledge management, Motivation management, Innovative performance, Firm performance, Pakistan, Citrus industry

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INTRODUCTION

Human Resource (HR) is considered as one of the key assets of a firm (Lim et al., 2021). HR Management (HRM) comprises three dimensions linked to organisations' emotional, social and intellectual resources (Díaz-Fernandez et al., 2014; Majeed et al., 2023). This research has tried to determine the impact of Motivation Management (MM) and Knowledge Management (KM) on Firms' Performance (FP). In addition, the role of Innovative Performance (IP) as a mediator is also investigated. KM is related to the knowledge of employees; past studies have considered it as the fundamental asset of a firm and found evidence of its significant association with FP (Singh et al., 2021; Khan et al., 2023). It is also regarded as a basic factor in gaining a competitive advantage. In recent times KM has emerged as a new and separate discipline with its own terms. Knowledge is defined as "a resource in itself; the effective management of knowledge enables those within the firm to extract more from all resources available to it" (Polanyi, 1966, p. 44). Nowadays, firms must manage their knowledge through the KM system to achieve the vision and strategic objectives. The whole firm works as a single unit to set the common direction of KM system, which leads to the speedy and effective growth of firms (Singh et al., 2021; Zada et al., 2023). The types of KM (tacit and explicit) have positive links with employees' IP and FP. The Tacit Knowledge (TK) is associated with employee experiences that are considered the key ingredient of innovation and creativity. Likewise, Explicit Knowledge (EK) is the codified coherence which is also useful for innovative performance. Such

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performance creates alternate profits and benefits for the organization both in financial and non-financial terms (Bushra et al., 2022).

In today's practices, firms are interested in creating the new knowledge. Innovative procedures greatly depend on knowledge (Amankwah-Amoah, & Adomako, 2021; Ullah et al., 2022). The study of Borghini (2005) described the IP as "efforts include the search for, and the discovery, experimentation, and development of new ideas, unique technologies, new products and/or services, new production processes and organizational structures" (pp.22). Innovation is thus implementing novel ideas. KM (tacit and explicit) directly influences the employees' creativity and innovative performance. In addition, it also affects firm performance in terms of benefits for the growth of unique and new ideas within the firms that lead to firm's survival. In this research, however, the concept of innovation and creativity use interchangeably, although creativity provides a base for innovation. Creativity is a big umbrella that supports innovation to flourish. Both play a fundamental role in firm's stability. The second variable of our study is an emotional resource of HRM, i.e., Motivation Management (MM); it is a pre-requisite for innovative employee activities, which are then linked to better FP. According to Berdicchia et al. (2021), workers can be motivated through Extrinsic Motivation (EM) (which consists of monetary and external rewards) as well as Intrinsic Motivation (IM) (which are based on internal and non-monetary rewards). Both types of MM (Intrinsic, Extrinsic) add unique effectiveness in PF and help employees show IP. Motivation can either be internal, "driven by deep interest and involvement in the work, by curiosity, enjoyment, or a personal sense of challenge" or external, "driven by the desires to attain some goal that is apart from work itself, such as achieving a promised reward or meeting a deadline or winning a competition"(Lin, 2011, pp. 265). EM is associated with monetary rewards that play an important role in employees' creative performance because most people perform better with their output when thoroughly rewarded (Berdicchia et al., 2021). Extrinsic rewards become more effective when a firm needs to yield speedy production. Likewise, intrinsic motivation is associated with non-monetary rewards like appreciation high level of self-satisfaction that describes what employees will actually do (Cabanias et al., 2020). Although the purpose of IM and EM is common, one is likely to be more important than the other for any person given a certain task.

The previous studies (Thneibat, 2021; Singh et al., 2021; Khan et al., 2022) have though described the relationship between KM, MM and creativity. For instance, Muñoz-Pascal and Galenda (2017) reported a positive association between intrinsic MM and KM in their study. Also, KM (tacit and explicit) was found to be positively associated with creativity, but MM is least addressed in early research. In addressing this gap, a thorough analysis is needed of how the MM (intrinsic and extrinsic) and KM (tacit and explicit) enhance the FP with effective employees' IP? Thus this study aims to investigate the effects of both the dimensions of MM and KM on FP through the role of IP as a mediator.

The sequence of work in this research is as follows. The next section presented a literature review and hypotheses. Afterwards, the research methodology section includes population, sample, survey and variables measures, followed by the results and data analyses. Finally, the major findings, implications, limitations, and future research directions are incorporated.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The Diffusion of Innovation (DOI) theory, one of the prominent theories of social sciences developed by EM Rogers in 1962, determines the theoretical lens for current research. DOI postulates that "over time, through communication, an idea or product gains momentum and diffuses or spreads through the population. People provide advice and information sought by others about innovation. Change agents will seek out early adopters to help speed the diffusion process" (Rogers, 2003, pp. 108). The early adopter is usually respected by his or her peers for the reputation of successful and discrete use of the new idea. Linking this theory with the creativity of employees depicts how individuals link new ideas with their performance, and also, they perceive that their creative ideas can help in boosting firm performance. Innovations are not adopted in the social system at once by individuals. Instead, they tend to adopt it sequentially. Every theory has some antecedents and outcome factors which create the before and after scenarios after its implementation. As in this theory, Knowledge Management and Motivation Management can be considered antecedents of DOI. For a magnified innovative product the, efficient Knowledge Management and Motivation Management system are required. When employees have the knowledge and high motivation, they may exhibit innovative performance and consequently, the firm performance also gets improves.

Knowledge Management and Innovative Performance

In last decennium, the construct of knowledge was frequently investigated by practitioners and academicians (Sarnikar & Deokar, 2017; Zada et al., 2022). KM been described as "a policy of acquiring the right knowledge from the right people at the most right time also motivating and helping others to share and put information into action in ways that strive to improve firm performance" (O'Dell et al., 1998 pp.162). There are many types of KM that prescribe the concept, but in this study, two dimensions of KM are considered: 1. Tacit Knowledge (TK) and 2. Explicit Knowledge (EK). Consequently, their impact on IP has been checked in this study. Evidence from earlier research (like Storey & Kahn, 2010) suggests that managing TK is more effective for innovation, creativity and achieving competitive advantage rather than codification strategy. Such codification is only concerned with EK. However, other works (e.g. Keskin et al., 2005; Khan et al., 2022) accentuated that the influence of EK is higher than the TK on IP. These contradicting outputs may be described by the fact that prior studies proved that both knowledge strategies might improve innovation and firm performance in a different way as KM has been studied from an individual, team or firms' perspective. Managing EK reduce time duration for specific work and improves efficiency (Wu & Lin, 2013; Saeed et al., 2022). While TK focuses on quality enhancement and also augments abilities for innovation (Wu & Lin, 2013; Mohammad et al., 2021). AS Nonaka and Takeuchi (1995) noted that "EK is based on information that can be easily codified and transferred among individuals of the organization" (pp.28). In contrast, "We can know more than we can tell. It refers to a kind of knowledge that human beings only develop through the experience gained over the years" (Polanyi, 1966, p. 4). The innovative activities involve the search for the experimentation and development of new technologies, new service processes, and designing firm's new structures. Innovation is all about implementing new and effective ideas (Thneibat, 2021; Zada et al., 2022). In firms TK is owned by individuals or held collectively. Individual's TK is an employee's skills, qualities, and abilities to learn and share habits to abstract their knowledge (Walker, 2017; Khassawneh et al., 2022). Due to this fact, every firm greatly depends on its employees for advances and growth of knowledge. This phenomenon also accelerates or de-accelerates the firm innovation pace. Improvements and proper management of TK help to make an efficient and effective production system, and greater knowledge-based learning that enhances employee's creative performance (Pascual & Galende, 2017; Khan et al., 2022). This discussion provides the basis that TK and EK are linked to employee's innovative performance. Hence it is hypothesized that:

H1: Tacit knowledge will have a positive impact on innovative performance.

H2: Explicit knowledge will have a positive impact on innovative performance.

Innovation and Firm Performance

In the organizational creativity literature, the term creativity is used to describe both terms like outcomes and processes. To date, most, but not all, of the organizational literature examined creativity in terms of outcomes, often called creative products, ideas, or solutions that are regarded as being 'novel and potentially useful' (Shalley et al., 2004: pp. 934). However, creative outcomes and other effective outcomes also are recognized to emerge as the outcomes of distinct creative processes, and these processes are proposed as a separate and distinct form of creativity. In other words, creativity embraces both the processes of developing novel ideas and the production of new and appropriate outcomes that can lead to innovation. Since then, it's the strong stance of current scholars that such firms who fail to engage in innovation mitigate their chances of achieving success and put themselves in great risk (Singh et al., 2021; Khassawneh, Mohammad & Momany, 2023). For this reason, innovation has become a requisite objective for firms (Thneibat, 2021; Zada et al., 2022). In this regard, the firm's performance and innovation are interlinked phenomena which are reported in many studies (Thneibat, 2021; Amankwah-Amoah, & Adomako, 2021). On the basis of cited facts and literature, the following hypothesis is posed:

H3: Innovative performance will have a positive impact on firm performance.

KNOWLEDGE MANAGEMENT AND FIRM PERFORMANCE

Firm performance is an important and frequently used term in management studies (Santos & Brito, 2012; Saeed et al., 2022). FM is better understood from a market perspective rather than an accounting perspective. The efficiency and market value of a firm is considered key measures for estimating firm performance. The company

may depend on the efficiency and the market where it operates (Khassawneh, Mohammad & Ben-Abdallah, 2022). Some of the measures that determine the performance of the firm are revenue, return on equity, and return on assets. KM plays an important role in this regard and has an influence on firm performance.

In this competitive environment, knowledge is considered a key element of competition. Firms are focusing on managing and creating knowledge to compete in a business environment. In previous studies association between KM and FP been frequently addressed (Darroch, 2015; Khan et al., 2022). The study of Carlsson (2003) asserted that "knowledge is an essential factor for firm success; as it signifies intangible competitive resource, operational routines and creative processes that are hard to imitate" (pp.322). KM provides a path for strategic planning and implementation that is needed for gaining competitive edge and better performance (Salojärvi et al., 2005). Some studies (e.g. Storey & Kahn, 2010; Ullah et al., 2021) suggested that personalization is related to TK, which may be more valuable when we compete in the market compared to the codification strategy based on EK. However, Some Other research (e.g. Keskin et al., 2005; Farid et al., 2021) found that the influence of EK is more intense than the TK on the performance of a firm. These contrast results depict that both KM dimensions may improve a firm's performance. When EK is managed well, it controls effects that save time and reduces the efforts needed for a specific task (Khassawneh & Elrehail, 2022). TK helps improve innovation quality and ability (Wu & Lin, 2013; Gul et al., 2021). This supportive discussion enabled us to pose the next hypotheses as:

H4: TK will have a positive impact on firm performance.

H5: EK will have a positive impact on firm performance.

Motivation Management and Innovative Performance

A necessary element for creating and managing employee motivation consists of reward systems, which may be internal (intrinsic) or external (extrinsic). Intrinsic rewards consist of personnel-related elements, such as self-satisfaction, the feeling of joy, engagement, curiosity, and interest (Do-Paco & Cláudia-Nave, 2013; Khan et al., 2021). Intrinsic Motivation (IM) has been explained as "the desire to perform an action for our own self, so as to experience the pleasure, enjoyment, and self-satisfaction in your job" (Connell & Ryan, 1989, pp.753). Past studies have regarded IM as a source of creativity and innovation (Lee et al., 2012; Nadeem, Saeed & Gul, 2020). In a similar course, the study of Andreeva and Kianto (2012) suggested that the implementation of processes and techniques and to take active participation may generate an impact and full implication of ideas in employees and improve their performance and innovation, which in future will probably support the generation of more useful and innovative ideas. In contrast, another finding depicts that IM is a compound factor needed for the development of innovation (Meisler et al., 2014; Burki et al., 2020). This study operationalizes EM in terms of monetary rewards: wage and protection of the job. This can build a comfort zone in a firm, where individuals have covered their basic needs and can generate new ideas for the firm. Extrinsic systems cover other more tangible aspects, such as monetary rewards or promotions. This signifies an association between IM and creativity which is empirically well supported in prior studies. But it is unclear when and how EM impacts innovation and creativity (Khan, Kaewsang-on & Saeed, 2019; Shalley et al., 2004). When one needs quick and fast task completion, employees respond more actively if they are sufficiently rewarded. EM is positively associated with IP of employees. Considering these lines, the following hypotheses are formulated:

H6: Intrinsic motivation will have a positive impact on innovative performance.

H7: Extrinsic motivation will have a positive impact on innovative performance.

Motivation Management and Firm Performance In the management discipline, there is a number of factors that influence individuals and their workplace settings. These factors have an impact on the individuals' actions and attitudes in the workplace. MM describes the path through which managers can promote the productivity and innovation of their employees. Motivation is the most powerful emotional resource that employees carry to the workplace on a daily basis. A motivated worker aligned his goals with firm and equated his efforts with firm direction. In past studies, researchers frequently tested the relationship between basic motivation dimensions (intrinsic and extrinsic) and FP (Olumuyiwa et al., 2012; Al Hassan, Fatima & Saeed, 2019). The study of Ryan and Deci (2000) suggested that when employees are internally or externally motivated, the quality of their performance

could be improved. Its operating sector or industry does not highly influence FP but is drastically affected by factors that keep employees motivated. An intrinsically motivated employee can feel satisfaction and enjoyment in his work, leading to better FP (Cabanas et al., 2020; Tahir, Rahman & Saeed, 2019). They also suggested that an individual who is extrinsically motivated so he performs job duties better, for which he gets extra bonuses, rewards and promotions. Researchers believe that a firm's success depends on its employees' abilities to perform a task and the level of the motivation behind this task's performance. Hence it is hypothesized as follows:

H8: Intrinsic motivation will have a positive impact on firm performance.

H9: Extrinsic motivation will have a positive impact on firm performance.

Mediating Role of Innovative Performance between Knowledge Management and Firm Performance

Innovation leads any business venture to a competitive advantage and a big chunk of profitability. In research studies, the impact of innovative applicability has ushered a new focus on the firm's performance. (Buligina, & Sloka, 2014; Ali, Ahmad & Saeed, 2018). KM is described as "a policy of acquiring the right knowledge from the right people at the right time, also motivating and helping others to share and put information into action in ways that strive to improve firm performance" (O'Dell & Grayson, 1998). As suggested in past studies, the dimensions of KM (explicit and tacit) help create an innovative and creative environment in the organization. EK is based on information that can be shared among individuals in the organization. TK is embedded within individuals of a firm or group of the firm, which cannot be codified. The innovative efforts include searching for the experimentation and development of new technologies, services, processes and firm structures. Innovation is about implementing new and practical ideas (Thneibat, 2021; Zia, Saeed & Khan, 2018). TK is either shared with individuals or held collectively. When shared collectively, it consists of interpretations of events and collaborative experiences with positive intentions. Individual's TK includes skills, qualities and abilities to learn and share habits to abstract their knowledge (Walker, 2017). This is the fact due to which knowledge of a firm grows at a different pace. Improving and managing TK help to make an effective production system; greater knowledge-based learning enhances employee's creative performance and improves innovative processes. (Pascual & Galende, 2017; Fatima, Majeed & Saeed, 2017). These arguments from prior studies conclude that IP mediates the relationship between TK and FP and between EK and FP. So the following mediating hypotheses are formulated:

H10: Innovative performance mediates the relationship between explicit knowledge and firm performance.

H11: Innovative performance mediates the relationship between tacit knowledge and firm performance.

Mediating Role of Innovative Performance between Motivation Management and Firm Performance In the new discipline, HR enriched and added a number of motivational and emotional rewards factors under its umbrella along with the source of knowledge. MM is a key element in the enhancement of innovation, creation and professional skills. (Meisler et al., 2014). This can build a comfortable zone in a firm where individuals cover their basic needs and can generate new ideas for the firm. Firms involve in the process of launching new products in the market to meet customer expectations, to gain customer loyalty and satisfaction. This consistency of innovation performance will meet customers' demands, increase product quality and minimize the cost of the product. The study of Berdicchia et al. (2021) suggested when an employee is internally or externally motivated, the quality of his/her performance could be improved. A motivated worker achieves his goals and aligns his efforts with the firm's requirements. Additionally, when an employee consistently improves his performance at the workplace, the firm also gains a competitive advantage. On the other hand, extrinsic systems cover more tangible aspects, such as monetary rewards or promotions. The need for extrinsic motivation for creativity is empirically well supported in post-studies (Shalley et al., 2004). Employees perform well when they are externally or internally motivated. When the employees are facilitated with the help of motivation, they become an important factor in firm IP, which consequently improves FP. Therefore the next mediating hypotheses are formulated as:

H12: Innovative performance mediates the relationship between intrinsic motivation and firm performance.

H13: Innovative performance mediates the relationship between extrinsic motivation and firm performance.

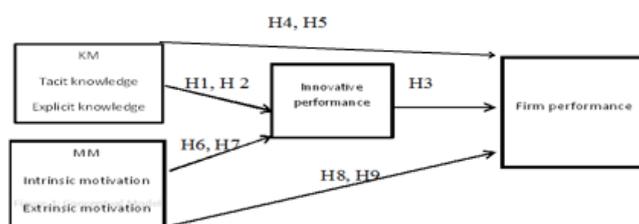


Figure 1: Research model

RESEARCH METHODOLOGY

This empirical research analyzed the citrus industry located in the Sargodha region. In this study, primary data was collected from employees working in the citrus industry. Respondents include top managers, front-line managers, supervisors, shift coordinators and human resource managers. Non-probability sampling technique, i.e. convenience sampling method, was used in this research. The questionnaires were distributed among 400 individuals who met the minimum sampling criteria (Krecie & Morgan, 1970). Out of the distributed 400 questionnaires 307 were received back. The response rate was 76%. The responses were screened for initial data extraction, in which some questionnaires were found incomplete and were discarded. Afterwards, 278 responses were used for final data analyses.

All measures were adopted from prior literature. The scale used to measure the Knowledge Management Motivation Management and Firm Performance items was based on a five-point Likert scale (1 for 'strongly disagree', 2 for 'disagree', 3 for 'neutral', 4 for 'agree', and 5 for 'strongly agree'). For Innovate performance, the five-point scale comprised 1 for 'very unsuccessful', 2 for 'unsuccessful', 3 for 'neutral', 4 for 'successful' and 5 for 'very successful'.

Statistical Packages for Social Sciences (SPSS) was used for data analyses and results generation in this study. Different data analysis techniques were applied, especially correlation and regression analyses, to check the relationships between different variables and to test the proposed hypotheses.

RESULTS AND DATA ANALYSES

Descriptive Statistics

Table 1: Demographic analysis

Respondents	Description	Percentage	Frequency
Gender	Male	74.9%	170
	Female	24.2%	55
Age	18-25	37.9%	86
	26-35	32.2%	73
	36&above	29.1%	66
Qualification	Bachelor	26.0%	59
	Master	38.7%	87
	Professional degree	19.4%	44
	Diploma/ Certificate	14.55%	33
Experience	1-5 years	27.8%	63
	6-10 years	35.7%	81
	11-15 years	22.55%	51
	16-20 years	11.5%	26
Job position	Manager	15.9%	36
	Line Manager	31.7%	72
	HR Manager	27.3%	62
	Supervisor	17.2%	39
	Any other	7.0%	16

According to the profile of respondents, male participants were 74.9%, far greater than female participants, 24.2%. This proves that males are outnumbered in the citrus industry workforce. The age details of the participants depict that ages 18-25 were 37.9%, ages 26-35 were 32.2%, and ages 36 and above were 29.1%. These statistics show that most of the respondents were young. Regarding the qualification of respondents, the details show that 26% of respondents had a Bachelor's degree, 38.7% had a Master's degree, 19.4% had a certain professional degree, and 14.55% respondents had some sort of diploma or certification. This provides evidence that most of the respondents were highly qualified. As far as the experience of respondents is concerned, they were immensely experienced too, as 27.8% of respondents have 1-5 years of experience, 35.7% of respondents with 6-10 years of experience, 22.5% of respondents have 10-15 years experience, and 11.5% respondents reported 16-20 years experience. Furthermore, the respondents of this study were mostly in managerial-level positions 15.9% were general managers, 31.7% were line managers, 27.3% were human resource managers, and 17.2% were supervisors.

Reliability Analysis

The reliabilities of different variables were tested by calculating Cronbach's Alpha (α). Table 2 depicts the reliability of each variable. The results of reliability analyses of all the constructs lay between 0.7 to 0.8, which is above the standard benchmark of 0.7 set by Nunnally (1978).

Table 2: Reliability statistics

Variables	EM	IM	EK	TK	FP	IN
No. of items	4	5	5	6	10	6
Alpha (α)	.70	.747	.727	.747	.756	.702

TK= Tacit Knowledge, EK= Explicit Knowledge, IM=Intrinsic Motivation, EM=Extrinsic Management, IP=Innovative Performance, FP=Firm Performance

Hypotheses Testing

In this research, linear regression analyses were used to test the hypothesized relationships. Regressions were carried out in two steps. In the first step, the relationship of TK, EK, IM and EM with IP was examined (see table 3 model 1). The results show that TK ($\beta=.207, p=.002$) and EK ($\beta=.284, p=.000$) impacted IP significantly so hypotheses H1 and H2 are confirmed and accepted. The results for H3 depicted that there is a significant association between IP ($\beta= 0.479, p=0.00$) and FP. Therefore these results affirmed H3 of the study. When regressions were carried out for the relationship between TK ($\beta=.254, p=.000$) and FP, and EK ($\beta=.455, p=.000$) and FP these were also found significant supporting H4 and H5. Likewise, H6 and H7 stated that IM and EM have positive effects on IP. When regressions were undertaken for these relationships, results supported the hypotheses as IM ($\beta=.309$ and $p=.000$) and EM ($\beta=.279, p=.000$) have significant effects on IP. Hence H6 and H7 are approved. Similarly, H8 and H9 stated that IM and EM positively affect FP. The results show significant positive association existed between IM ($\beta=0.262$ and $p=0.000$) and FP and EM ($\beta=0.135$ and $p=0.000$) and FP. Hence H8 and H9 of the study were also accepted.

Mediation Analysis

This research deployed Hayes (2017), i.e. Hayes' Macro PROCESS model 4, to test the mediation relationships. Hayes' PROCESS (5000 bootstrapping) was used in each of the mediation case (see table 3). In the first case, TK indirectly affects FP via IP ($\beta=.27, LLCI= 0.43, ULCI=0.22$). Also, EK was found to have a positive indirect relationship with FP via IP ($\beta=.34, LLCI = 0.55, ULCI =0.28$). The lower and upper levels of confidence intervals in each of these two cases did not show zero. These results affirmed the mediating role of IP in both cases resulting in the acceptance of H10 and H11. On the hand, the mediating results of MM's dimensions depicted that IM has an indirect relationship with FP through IP ($\beta=.24, LLCI = 0.18, ULCI =0.31$) and in the case of EM as well ($\beta=.17, LLCI = 0.13, ULCI =0.25$). On the basis of these results, H12 and H13 were accepted.

Table 3: Direct, total and indirect effects: Mediation effects

TK	β	S.E	t	P
Direct and Total Effects				
TK Regressed on FP(Direct Effect)	.254	.11	8.17	.000
IP Regressed on FP(Direct Effect)	.479	.10	7.76	.000
TK Regressed on IP(Direct Effect)	.207	.04	4.01	.002
TK Regressed on FP controlling for IP(Total Effect)	.209	.10	7.95	.000
Indirect Effect using Bootstrap				
	β	Boot S.E	LL 95% CI	UL 95% CI
	.27	.09	.43	.22
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EK				
Direct and Total Effects				
EK Regressed on FP (Direct Effect)	.455	.17	10.08	.000
EK Regressed on IP (Direct Effect)	.284	.14	11.02	.000
EK Regressed on FP controlling for IP (Total Effect)	.40	.22	8.84	.000
Indirect Effect using Bootstrap				
	β	Boot S.E	LL 95% CI	UL 95% CI
	.34	.08	.28	.55
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IM				
Variables	β	S.E	t	P
Direct and Total Effects				
IM Regressed on FP (Direct Effect)	.262	.09	7.78	.000
IM Regressed on IP (Direct Effect)	.309	.07	11.12	.000
IM Regressed on FP controlling for IP (Total Effect)	.224	.13	9.85	.000
Indirect Effect using Bootstrap				
	β	Boot S.E	LL 95% CI	UL 95% CI
	.24	.16	.18	.31
<hr/>				
EM as well ($\beta=.17$, LLCI = 0.13, ULCI =0.25)				
Direct and Total Effects				
EM Regressed on FP (Direct Effect)	.135	.12	9.98	.000
EM Regressed on IP (Direct Effect)	.279	.04	11.02	.000
EM Regressed on FP controlling for IP (Total Effect)	.201	.10	10.15	.000
Indirect Effect using Bootstrap				
	β	Boot S.E	LL 95% CI	UL 95% CI
	.17	.06	.13	.25

Noten = 267. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000. LL = lower limit; CI = confidence interval; UL = upper limit; Level of confidence for all confidence intervals in output: 95.00

TK= Tacit Knowledge, EK= Explicit Knowledge, IM=Intrinsic Motivation, EM=Extrinsic Management, IP=Innovative Performance, FP=Firm Performance

DISCUSSION

The findings of the research at hand confirmed that MM and KM have statistically significant effects on the firm's performance, and for these relationships, the role of employees' IP is clinically important. This study showed effective firm performance can be achieved using efficient MM and KM systems. It is accentuated that firm performance can be leveraged with the help of technical skills (explicit and tacit knowledge) and attitudinal ingredients of motivation (intrinsic and extrinsic). This study found a positive association between motivation (intrinsic, extrinsic) and FP as several studies attempted to explain that motivation management is a key element in the development of creativity and innovation which results in effective firm performance (Cabanas et al., 2020). Current research findings also suggested that EM can be triggered with the help of financial bonuses and rewards that are really effective for employees' performance. Workers devote full attention to their jobs when they believe

their hard work and efforts will pay off. In the citrus industry, it is important to note that employees mostly work in quarts for which proper rewards and bonuses are vital, which augments employees' IP and thus enhances FP. Likewise, when the employees are intrinsically motivated, they work with their best efforts and greater zeal, mitigating the need for rewards, which frequently improves employees' performance and consequently improves FP. In some situations, certain forms of EM may combine synergistically with IM and show positive effects on IP of the employees. On the other hand, the results of the current study also affirmed the mediating role of IP between MM and FP. This study also approved equal importance and support for both dimensions of MM.

This study's findings also confirmed the close association between KM and employees. These findings are consistent with prior research and robust as both dimensions of KM have statistically significant impacts on the FP (Mohammad et al., 2021). The results also confirmed that employees' IP has a mediating role between KM's dimensions (tacit and explicit knowledge) and FP. An organization's overall financial, creative and innovative performance greatly depends on the degree to which the organization uses the knowledge (created by the firm) and turns this knowledge into value-capturing activities. Like-way an effective firm might progress further if it sagely utilized the TK developed by individuals. On the other hand, EK is needed for effective communication and technical skills and to retain the bulk of the firm's knowledge in situations where employees walk away with some important personal knowledge in the form of experiences (Amankwah-Amoah, & Adomako, 2021). KM also improves innovative performance directly and increases a firm's innovation speed. Thus, a close relationship exists between the firm's knowledge and its capacity to create and innovate (Singh et al., 2021). In tacit knowledge, experiences and inter-knowledge play vital roles in employees' innovative capabilities and in improving firm performance.

CONCLUSION

This study examined the dimensions of KM (tacit and explicit knowledge) and MM (intrinsic and extrinsic) and their impact on FP with the mediation of IP in the citrus industry. Both the factors, i.e., KM and MM, are vital for enhancing employees' innovation and creativity and ultimately improving firm performance. The outcome of this research provided empirical evidence that appeared to vindicate the grandness of explicit and tacit knowledge. Intrinsic and extrinsic motivation also has effects on innovation and improve the firm performance. Further, firms for improvements in their performances require more innovation and creativity and would be advised to adopt procedures and devise policies that could promote and strengthen TK and EK in organizations, such as encouraging collaboration, making groups and mastering craftsman. Likewise, managers may use the latest techniques and new documents to improve employees' individual performance. For the sake of innovation and economic outcomes of the firm, it is critical that managers should focus on both tacit and explicit knowledge for firm performance. Motivation is also approved as an essential constituent that leads to better firm performance. Motivating the employees with monetary and non-monetary perks and using their experiences and knowledge to gain innovative performance is necessary. It is concluded that firms that use and manage their knowledge and motivate their employees effectively remain competitive and outperform in today's competitive era.

IMPLICATION OF RESEARCH

The findings of this research are valuable for the firm's management. On the basis of our results, it has been demonstrated that the adoption of KM and MM systems has a greater impact on the innovative performance of employees, and it also improves firm performance. This highlighted that firms who want to improve their performance should mainly focus on implementing KM and MM strategies. Hence it is suggested that firms now depend more on the knowledge and motivation process rather than their abilities to change the process. In past studies, the positive association between IM and FP has been defined frequently, but in the case of EM, the literature is not so dense. This study's positive association and significant relationship between EM and FP defined new theoretical perspectives. It is depicted that the presence of higher wages sometimes helps to generate new ideas in the firm. For example, extrinsic motives are highly focused on employees nowadays because they receive the desired rewards for their efforts. This study also found a significant relationship between EM and IP that was least addressed in the past. These are some of the major theoretical implications of the current study. From the managerial perspective, the TK, EK, and IM and EM might help the managers refine their FP. Managers should effectively disseminate tacit and explicit knowledge and utilize this knowledge according to the firm's requirements.

For instance, providing employees with the facilities of open offices and allocating some spare time to share ideas can help the employees to show more creative and innovative performance. Managers can use these findings as an argument to convince the investors of the firms about the goodness of applying KM and MM mechanisms.

LIMITATIONS AND FUTURE RESEARCH DIRECTION

Like any good research, this study also suffers from some limitations which provide the basis for meaningful directions for future research. First, the data was collected only from selected citrus firms through convenient sampling, so the results may not show the true picture of the entire citrus industry. Any future study should focus on all the citrus firms for data collection located in the region mentioned and consider some other sampling methods as convenient sampling has few limitations. Second, the research was based only on citrus firms; future research may test the proposed model in some other sectors and areas. Third, this research used a subjective measure against firm performance, which is not the only measure of firm performance. In the future, the researcher should consider any objective measure for firm performance. Fourth, this study tested only two dimensions of knowledge and motivation management, but some other important dimensions are yet to be investigated. So any future research should undertake all such remaining dimensions. Further, this study only focused on two important antecedents of innovative performance and firm performance; future research should further enlarge this list by considering some other antecedents. Fifth and last, this research deployed a cross-sectional research setting; future studies may set longitudinal or time lag research settings.

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