The impact of innovation on customer satisfaction in the commercial banks: Business performance as a mediating variable

Ahmad Marei[a*], Shafig Al-Haddad[a], Luay Daoud[b], Ala Habashneh[c], Raed Fariz[c] and Riham Aldamisi[c]

[a]Middle East University, Amman, Jordan
[b]Institute of Public Administration. Riyadh, Saudi Arabia
[c]Princess Sumaya University, Jordan

A B S T R A C T

Innovation is an important variable, and it has received less attention. The purpose of this study is to examine the impact of innovation on customer satisfaction. The study also examines the business performance as a mediator between innovation and customer satisfaction. The study collected data using a questionnaire. A total of 387 responses were collected and analyzed using AMOS. The findings show that innovation positively affected customer satisfaction and business performance. Business performance affected customer satisfaction. Business performance also mediated the effect of innovation on customer satisfaction. Decision makers in the banking industry are suggested to increase the level of innovation to improve the business performance and customer satisfaction.

1. Introduction

Institutions had also recently been pushed to operate in a modern world and therefore become highly inventive, achieve superior value as well as adjust very optimally to both the needs and desires of customers (Albert & Nora, 2003). Moreover, the value of the innovative products also maximizes from the view of the customer (Naveed et al., 2012). Once some company makes innovative products, it can achieve customer satisfaction and can increase the reliability of the customers concerning their product. Currently, customer satisfaction is one of the elementary necessities of industrial companies in developing countries (Daragahi, 2017).

Innovation indicates that companies are introducing something novel and useful that can improve or even exceed their levels of consumer fulfilment. Because innovation involves putting something unique up, and this should contribute to increased customer satisfaction excluding key competitors. This is indeed the essence behind innovation, which "attracts customers and satisfies them" (Simon& Yaya, 2012). Customer satisfaction, after all, is a business concept for assessing how well a product, as well as services provided by a company, can satisfy the customer and even fulfil him.

Many scholars had also established various concepts across multiple points of view in reviewing and updating the studies concerning innovation (Naveed et al., 2012; Pishgar et al.,2013; Simon & Yaya, 2012). Innovation could well be defined as "a product, process, marketing method or organizational method that is new (or significantly improved) to the firm, including products, processes, and methods that firms are the first to develop and those that have been adopted from other firms or organizations" (Xiang et al., 2013).

Although this focuses on customer satisfaction by strengthening greater relationships that may further promote a business ' performance, there seem to be unforeseen consequences due to higher concern for potential customers, as the decreased willingness of a company to engage in innovation (Pishgar et al., 2013; Boulding & Kirmani, 1993).

* Corresponding author
E-mail address ahmadmarei27@gmail.com (A. Marei)

Companies implement several combinations and innovative ideas which seek to gain as well as delight customers. (Mainardes, Teixeira & Da Silveira Romano, 2017). Furthermore, executives become better off investing in innovation if they believe that the customers' expectations weren't fully satisfied with its present products. After all, an investigation that examines customer satisfaction tends to examine innovation.

The current study is noteworthy from the services sector, which is, the banks, rather than the manufacturing sector. This study illustrates the value of innovation for long-lasting partnerships in the context of customers and organizational success.

1.1 Problem statement

Many researchers (Sadikoglu & Zehir, 2010; Nerkar et al., 1996; Hongqi & Ruoyu, 2012; Prajogo & Sohal, 2003) have argued that competitors can easily copy non-innovative programs. Therefore, they do not offer businesses with a continued competitive advantage. They declared that businesses need to advance their unique innovative abilities to enable them to improve their performance and attain a competitive advantage in such a method that would be hard for competitors to copy. This is in accord with many theories (Nimrod, 2008; Devloo et al., 2015; Do Cho & Chang, 2008) that focus on capabilities and their implications to maximize business performance. According to these theories, and to contribute to the continued competitive advantage, innovative ideas should be appreciated, unique, incorrectly imitable, and hard to copy. Other capabilities include management skills, routine and organizational procedure and information and knowledge of the firm controls.

Based on this, it is beneficial to study the role of innovation in enhancing business performance and at the same time achieving customer satisfaction. Moreover, the main issue highlighted in this research is the lack of enough studies about the relation linking innovation and customer satisfaction through business performance, consequently, the goal of this study is to answer the subsequent question:

What is the impact of innovation on customer satisfaction through business performance as a mediating variable?

1.2 Research objectives

The purposes of this research are to explore the relation linking the concepts and to test the hypotheses. Therefore, the organized questionnaire will be designed. Overall, the study includes different questions related to business performance, innovation, and satisfaction. The questionnaire will be topically arranged, and the constructs will be measured. The theoretical model finds an important provision based on the experimental study. This study aims to determine the type of relationship between innovation, business performance, and customer satisfaction in a banking context. Whereas innovation consists of process innovation.

1.3 Contribution of the study

The purpose of this study is to enrich the literature as it is exclusively focusing on the Commercial Banks sector in Jordan. In addition, there exists a clear lack of previous studies considering the effect of innovation on customer satisfaction in different industries in the Arab countries. It also examines the mediating factors between these relations with business performance. The data collection process focuses on different categories of participants in Jordan. This study develops and tests a model to link the impact of innovation on customer satisfaction mediated by business performance. The source of the model's framework is presented as well as the research design and methodology for empirical testing is exhibited.

1.4 Ethical considerations

In this research, many important aspects of ethical considerations need to be followed, particularly as the work will be not only with the normal participant's existence questioned behind the screens but also direct contact with participants. The job must be performed with the highest protection and privacy requirements. Respect for the study of all participants is a priority. Attention and sensitivity will be addressed because all research participants are human beings. People's opinions vary around the way they think and there is no absolute answer. The participants will be briefed about the main aspects of the study. Regarding anonymity, the name of the participants will not be mentioned in the final research. Worth to indicate that the primary research data is stowed in an extremely safe place that can only be accessed by the researcher.

All will be prepared and discussed with integrity and transparency. Also, the respondent always can answer confidentially. Then it will be ensured that all individuals and organizations here will be allowed to participate anonymously. All participants will be guaranteed confidentiality of the research data as well. Per no doubt, the participants will be willingly for all respondents in this study. In addition, any part of the work used in the research will be acknowledged and referred to the original authors.

2. Literature Review

The concept of innovation has been discussed by a great number of authors in literature; some of them defined innovation as creating new ideas, products, or services (Daragahi, 2017). Besides, Naveed, Akhtar & Cheema, (2012) defined it as having something new by the firm to obtain and maintain its customer satisfaction. The concept of innovation was not limited to a specific field, Wikhamn (2019) affirmed that innovation will take the form of new products or new services. Naveed et al. (2012) emphasized that innovation could be just a new idea.

Prior research suggested that many companies are interested in innovation because of its impact on business performance; if the company gives priority to innovation, worked to motivate its employees to produce new products, and finding suitable marketing strategies to present these products certainly, the company will get the better business performance and faster growth (Turnbull, Slow & Richmond, 2019). Uriah, Tham, & Azam (2019) have suggested that small businesses can use innovation as a means to have a good business performance. On the other hand, Georgellis, Joyce & Woods (2000) mentioned that not all small businesses can grow and develop unless they rely on innovation. In comparison to Entrepreneur companies that focus on creativity and preparation to grow and thrive.

Former studies have shown that innovation has a strong effect on competition in business (Udriyah et al., 2019). In order to satisfy the demands of consumers and their different requirements, and after the spread of competition between companies within one industry, the need for innovation emerged to maintain their customers (Simon & Yaya. 2012). Former research has shown that the relationship between innovation and competitive advantage is a direct relationship; the more innovation, the more competitive advantage is reflected in company business performance (Udriyah et al., 2019). In the end, Naveed et al., (2012) believed that the goal of innovation is to find something new and unparalleled to differentiate one company from its competitors in the same industry.

Several authors have recognized the importance of innovation to obtain customer satisfaction (Daragahi, 2017). Naveed et al. (2012) considered customer satisfaction as the goal for all companies so these companies work to find products that satisfy their customers. Kiumarsi, Mohd Isa, Jayaraman, Amran & Hashemi, (2020) focused on one of the most significant aspects impacting customer satisfaction, which is the business's ability to integrate the quality of service or product with innovation.

Consumer satisfaction was perceived to be one of the most critical factors for the continuity of the business. (Daragahi, 2017), also it considers the way to reach customer loyalty (Kiumarsi et al., 2020) and increasing the company market share (Naveed et al., 2012).

As for innovation within the banking sector, in particular, Apak, Tuncer & Kosa, (2012) examined the emergence of innovation in this sector to improve the services provided. In their research, Abou-Moghli, AlAbdallah & AlMuala, (2012) talked about the importance of banks working to support innovation because of its positive impact on their sector. Besides, innovation allowed banks to offer high-quality and lower-cost products and services.

The previous studies revealed that considering the competition between banks is one of the most important factors that work on developing the bank and achieving better performance (Abou-Moghli et al., 2012). Furthermore, in his study, Simiyu, (2013) stressed that innovation worked to create intense competition between banks to reach and maintain customer satisfaction.

Abou-Moghli and Al- Abdallah (2012) talked about using innovation in banks; they studied its effect on four dimensions namely time, quality, cost, and flexibility. The result showed that all dimensions were positively affected by innovation; innovation affected the time required to create new products and services in banks. Innovation also is reducing the time it takes to service customers. Besides, banks that use innovation have products and services with good quality. The cost also is affected by innovation because it is allowing banks to have lower-cost products and services. As for flexibility, the implementation of new methods in products and processes helps banks to create goods and services according to customer needs.

Many studies dealt with innovation and its relationship to business performance, while others have studied its effect on customer satisfaction. As for this study, it will combine and discuss the three concepts of innovation, business performance, and customer satisfaction. Also, we encounter how these concepts are related to the bank sector.

2.1 Innovation

In contrast to the definitions discussed throughout the literature, Naveed, Akhtar and Cheema (2012) described innovation by way of an invention for something revolutionary through a company that enriches customer experience, leading to an increase in earnings. Moreover, the definition indicated by Chen, Wang and Huang (2019) was endorsed since it acknowledges that it does not merely offer a quite common definition of innovation but, more critical to understand, where innovation was represented by Chen, Wang and Huang (2019) as a special product, service, or automation that is legitimate as well as revolutionary for the venture who introduce it. This interpretation appears particularly suitable for the study,

although it can be verified throughout the banking sector. Several authors have long argued that people need to be actively engaged through innovation for firms to maintain everyone's comparative benefit (Damanpour & Evan, 1984; Damanpour, .1991; Camisón & Villar-Lópe, 2014; Yamin et al., 1997). It advises that the boost in groundbreaking activities of the firm should be introduced, with more creative outcomes that are of interest to the firm (Chen, Wang & Huang, 2019). Therefore, innovation was figured related to the current research as it identifies an important factor in business performance. Hence, the innovation concept has led customers to participate more in the Jordanian banking sector since the customer has used several innovative solutions to save their time in a complementary way Researchers need to adopt new ways to intellectualize innovation (Al-Hawari, Hartley & Ward, 2005). Additionally, up to our knowledge, limited studies conducted in the Jordanian banking sector found that innovation has a positive and direct influence on business performance, therefore, the findings may not be generalized to other sectors like telecommunication, restaurant, and others. Therefore, and based on the reviewed literature, we propose our first hypothesis:

H₁: *In a banking context, innovation has a positive and direct influence on business performance.*

2.2 Customer satisfaction

Customer satisfaction is the business terminology required to accurately determine that the product or service provided has been able to fulfil the customer's standards and satisfy each customer's needs and wants (Nemati, Khan & Iftikhar 2010). Although, if the business produces the product or service personalized and suited to customer preferences, the customer would be highly satisfied (Naveed, Akhtar & Cheema, 2012). Lacobucci, Ostrom, and Graysan (1995) have mentioned that customers can become dissatisfied when the company provides a high value of products or services that they consider less important from their point of view, which causes failure for the firm to attain customer satisfaction. This problem arises because of weak communication with customers (Naveed, Akhtar & Cheema, 2012). Therefore, Chu and Dosai (1995) mentioned retailers play a major role to solve the lack of interaction with customers to attain their satisfaction. In this line, Anderson and Sullivam (1993) argued that customer satisfaction rests on the repurchase of a service or product. Unless firms handle a quick response to customer feedback and complaints efficiently, customer satisfaction will increase. It gives the impression that customer satisfaction is strongly influenced by innovation, for instance, The newer products and innovations a business can deliver, the higher customer satisfaction can improve, which results in an improvement in the company's revenues.

In fact, it has been found that the main path to succeed and thrive on the market is through the willingness of the company to offer products or services designed to suit the desires of its customers (Mahmoud, Hinson & Anim, 2018). In our study, however, we suggest our second hypothesis that innovation has a positive influence on customer satisfaction. Which is the case; it may be that innovation could influence the relationship of customer satisfaction. Therefore, in our second hypothesis, we propose that firms may influence customer satisfaction by providing innovative solutions:

H₂: *In a banking context, innovation has a positive and direct influence on customer satisfaction.*

2.3 Business performance

Several authors, such as Chokesikarin (2014), Lee and Chu (2017), and Sun and Kim (2013), have discussed the direct relationship between customer satisfaction and business performance. Suchánek, Richter, and Králová (2015) have described the firm's business performance as compared to output, i.e. the valued output from a particular company, which may thus be further carefully planned and tested. Nevertheless, Suchánek, Richter and Králová (2015) have argued that the unambiguous importance on time and cost when determining business performance has been mislaid so far. Although Suchánek, Richter, and Králová (2015) have suggested, in their study, that there are potential restrictions on linking a walk across business aspects to encourage dissimilarity in business performance, which signifies a strict way to get healthier business performance. In our research, we propose the role of business performance and how they influence customer satisfaction. Therefore, and based on the reviewed literature, we propose our third hypothesis as follow:

H₃: *In a banking context, business performance has a positive and direct influence on customer satisfaction.*

Mediation could be either justified or selective. The idea of a mediating relationship recognizes the existence of different variables between any of the independent variables and the dependent variable. Further, research upon this relationship between innovation and customer satisfaction are less well-developed, as previously described. To our knowledge, the role of business performance is still not completely obvious owing to the unavailability of academic research throughout the Jordanian banking sector. However, our research focuses on establishing an indirect relationship between innovation and customer satisfaction, mediated through business performance. As a consequence, improved innovation contributes to a higher level of business performance. This would contribute to a boost in revenues as well as a rise in rivalry due to improved market results. It is also founded on the assumption that stronger outcomes in the result would increase the consumer's perception of performance and thereby raise the benefit of customer satisfaction. Therefore, to investigate the mediating role of business performance, we suggest the following hypotheses (The conceptual model can be seen in Fig. 1):

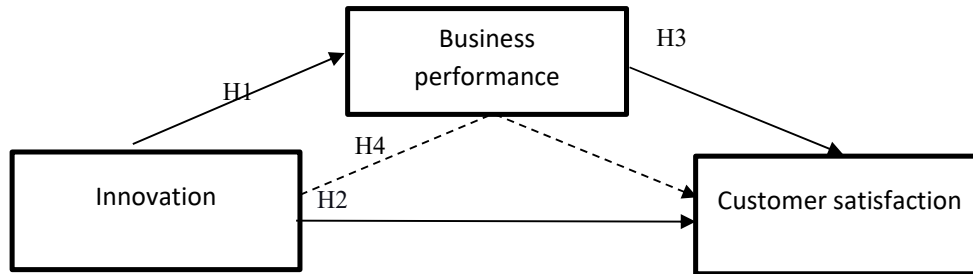**H₄:** *Business performance mediates the relationship between innovation and customer satisfaction.*

Fig. 1. The model was developed based on (Cuevas, Parga-Montoya and & Fernández-Escobedo (2019).

3. Methodology

A survey has been used to test the conceptual model. These quantitative research methods predict individual responses and examine the interrelationship between constructs (Huff, Munro & Newsted, 1998). Previous research by Malik and Ahsan (2019) used the survey approach to examine respondent's feedback. We have collected data from 387 respondents using an online questionnaire; Potential respondents are clients of commercial banks in Jordan. The online survey has many benefits including wide-ranging, it can also sustain continuity between research and data collection environments (Liu et al., 2016). In addition, an online survey was used in previous research such as (Pratap Singh, Chakraborty & Roy, 2016). Therefore, we believe that the best approach to this analysis is the survey process.

The scale measures were selected as rating questions with a weight ranging from 1 to 5 corresponding respectively to "Completely Disagree", "Disagree", "Neutral", "Agree" and "Completely Agree" to be able to understand how people feel about survey questions considering model constructs. The five Likert scales were chosen in previous studies such as (Mahmoud, Hinson & Amin, 2017; Marei & Iskandar, 2019; Pratap Singh, Chakraborty & Roy, 2016).

3.1 Data Analysis, reliability and validity

To study the relations between the constructs and to test the hypotheses, a structured questionnaire will be designed. In general, the study includes questions related to business performance, innovation, and satisfaction. The questionnaire will be topically organized, and the constructs will be measured.

The theoretical model finds an important provision based on the experimental study. This study aims to identify the type of the relationship between innovation and customer satisfaction in organizations. Innovation consists of process innovation, organization innovation, and marketing innovation.

4. Data analysis

In this section, we provide an exhibition of the results obtained by analyzing data collected by a questionnaire which is developed in this study. We show a descriptive analysis of respondents, descriptive analysis of constructs, reliability coefficient for variables, and simple and multiple regressions.

4.1 Descriptive analysis

Research data were collected by an online questionnaire using a sample of 410 participants, 23 of respondents' answers were ignored. As a result, we have 387 respondents analyzed.

Results analysis shows that 68% of participants were males, while females accounted for 32 %. With regard to status, 43% were singles, and 57 % were married. Concerning the age of the participants, the category 16-24 years represented 5% and the category 25-34 years represented 62% and the following category 35-44 represented 23%, and the category 45-54 represented 9%, and above 54 represented 1%. The results also show participants' education level was .3 high schools, college 14%, and bachelor's degree 67%, which was the highest, master's 14% and PhD holder 4%.

The analysis shows means and standard deviation for measurement statements related to innovation influence towards business performance, results reveal that the bank regularly addresses new, unmet customer needs with (Mean 3.84, STD 1.097), and respondents who found that bank products or services are very innovative in relation to competitors with (Mean 3.14, STD 1.69), further, respondents who believe that our products or services regularly solve customer needs, which were

not solved by competitors (Mean 3.18, STD 1.145), lastly respondents who found that the bank regularly utilizes new distribution channels for their products and services (Mean 3.73, STD 1.085).

Analysis shows means and standard deviation for measurement statements related to innovation influence towards customer satisfaction, results reveal customers who feel satisfactory of bank's overall performance with (Mean 3.03, STD 1.179), and respondents who found that bank overall performance has met their expectation with (Mean 3.76, STD 1.036), further, respondents who believe that the satisfaction level of the bank is quite close to their ideal bank (Mean 3.53, STD 1.138). Analysis also shows means and standard deviation for measurement statements related to business performance influence towards customer satisfaction, results reveal customers who feel procedures and activities are completed on time with (Mean 3.56, STD 1.105), and respondents who believe that work or approval steps are short with (Mean 3.69, STD 1.030), and respondents who are satisfied with the image of workflow processes after radically changing processes with (Mean 3.53, STD 1.049), further, respondents who believe that bank employees are transparent to client's in terms of all issues and processes with (Mean 3.55, STD 1.127). All the results of the reliability coefficients are acceptable and within the range as following, Innovation influence towards business performance is 0.84, then Innovation influence towards customer satisfaction is 0.78, Business performance influence towards customer satisfaction.is 0.87, and all variables scale together is 0.92.

AMOS analysis

The measurement model and structural model were conducted to ensure that the data is ready for testing the hypotheses.
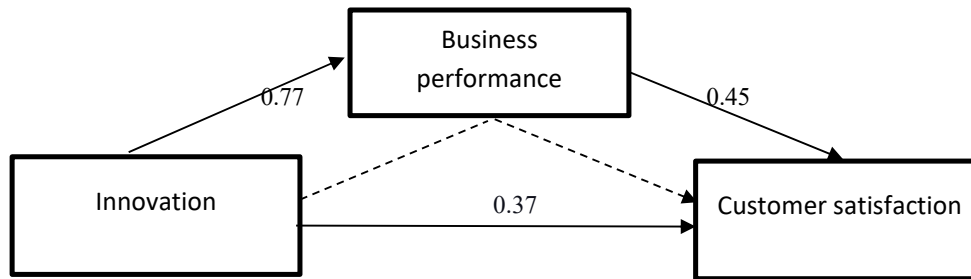
Chi-Square (df) = 2891(9)   Relative Chi-Sq (<=5) = 3.912 GFI (>=0.9) = 0.902   CFI (>=0.9) = 0.931 IFI (>=0.9) = .931 RMSEA (<=0.08) = 0.071
Fig. 2. The results of testing the hypotheses

Fig. 2 shows the structural model. It shows that the value of relative Chi-sq (3.912) is less than 5. In addition, other indices such as GFI (.902), CFI (0.931), and IFI (.930) are greater than 0.90 which indicates that these indices are accepted. For the RMSEA, the value is 0.071 which is less than 0.08 and this indicates that these values are accepted. As shown also in Figure 2 and supported with Table 1 below, all the proposed hypotheses are accepted. For the effect of innovation on business performance, it can be seen that the beta is 0.77 with significance level of less than 0.01. Thus, H1 is supported. For H2, innovation also affected the customer satisfaction with a beta of 0.37 and significance level of less than 0.01. The third hypothesis showed that business performance affected the customer satisfaction with a beta of 0.45 and significance level of less than 0.01. Lastly, the mediating role of business performance was confirmed as the direct and the indirect effect are significant. The beta coefficient of the relationship of the indirect effect is 0.231 with significance level of less than 0.01. Thus,

Table 1
Regression Weights: (Group number 1 - Default model)

				Estimate	S.E.	C.R.	P	Label
H1	Business Performance	←	Innovation	0.77	0.032	23.813	***	Significant
H2	Customer Satisfaction	←	Innovation	0.37	0.05	7.331	***	Significant
H3	Customer satisfaction	←	Business	0.45	0.05	8.909	***	Significant
H4	Customer Satisfaction ←Business performance ←Innovation			0.231	0.058	3.965	***	Significant

4.3 Discussion

The concept of innovation has been discussed by a great number of authors. Innovation means that firms are making novel things to raise their customers and serve their requirements. In this study, we focus on studying three concepts; innovation, business performance, and customer satisfaction together. The result indicates that Innovation takes a direct positive effect on business performance, and this result is consistent with Prajogo and Sohal (2003) study which showed that a positive impact of innovation on business performance. The second result confirms that Innovation has a direct impact on customer satisfaction. This result coincides with Anderson and Sullivan (1993) result which confirmed that customer satisfaction was

strongly impacted by innovation. It also ensured the results of Daragahi (2017) which emphasized the positive and direct impact of innovation on customer satisfaction. The third result demonstrated that business performance takes a positive and direct impact on customer satisfaction as several authors such as Chokesikarin (2014), Lee and Chu (2017), and Sun and Kim (2013) have explored the direct relationship between Customer Satisfaction with business performance. The fourth and last result suggested that business performance mediates the relationship between these two innovations and customer satisfaction. We emphasize the priority of innovation in the workplace, how innovation can work to motivate employees to produce new products and finding suitable marketing strategies to get better business performance and fast growth.

The researchers can conclude the result from Cronbach alpha above 70%, which means that all hypotheses are strong. H3 which provides that: in a banking context, business performance has a positive and direct influence on customer satisfaction, and it was very strongly supported, then comes H1: in a banking context, innovation has a positive and direct influence on business performance, and the last one H2: in a banking context, innovation has a positive and direct effect on customer satisfaction. In addition, the researchers conclude that the results for Cronbach alpha are within the range and the hypothesis presented strongly as following: Cronbach alpha for the 11 measurement scale items were = 0.92, then followed by H3 which stated that Business performance influence towards customer satisfaction.is 0.87, then followed by H2 which stated that Innovation influence towards business performance is 0.84, and then H1 which stated that Innovation influence towards customer satisfaction is 0.78

4.4 Conclusion

The outcomes of the study show that there is a strong and positive correlation that exists between innovation and business performance. It means that for business performance you'll need to understand the business's current performance and future potential using tools and resources. The results of this paper can be useful particularly for other banks in Jordan to explain the relation to the improvement of Innovation influence towards business performance. In practice, it can be realized through several training courses of business performance and customer satisfaction will be fruitful. Although there are certain boundaries to our research (i.e. random selection of respondents by gender), we think that our research provides inspiring results and new motivations for more research.

4.5 Practical implication

Based on the findings, managers can understand the role of innovation implications in managing career success in business firms in the Jordanian banking sectors. In order to enhance the business performance of success and customer satisfaction, managers should adopt these practices to become more innovative, offer more quality, and respond more efficiently to consumers' requirements and preferences. Managers should also improve their practices in communication and involvement in career success by linking these practices to career and promotion and improving employees' understanding of their career requirement and increasing their involvement with them.

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