

## Analyzing the impact of team identification on team innovation

Hagar Hesham Mohamed

Abdel Moniem M.K. Elsaid

Ghadeer Mohamed Badr EIDin Aboul Ela

Faculty of Commerce and Business Administration

Future University in Egypt

---

### Keyword

*Team Commitment, Team Innovation, Teamwork, Social Identification, Innovative behavior, Self-Categorization, Team Self-esteem.*

---

### Abstract

*Teams are becoming the main building blocks that organizations use to achieve innovation and produce better results in today's complex, dynamic, and competitive business contexts. The purpose of this research to investigate the impact of team identification (with its three dimensions self-categorization, team self-esteem & team commitment) on team innovation. The study is applied on a sample of the teams that are working in the private mobile communication sector in Egypt. The research findings found that team identification (with its three dimensions self-categorization, team self-esteem & team commitment) had a positive significant impact on team innovation. The main study recommendation is to enhance the team identification for the teams to gain more creative and innovative outcomes.*

---

### Introduction

In contemporary business landscapes characterized by intricacy, dynamism, and competitiveness, businesses are progressively depending on teams as fundamental units for attaining innovation and producing exceptional results (Mamakouka et al., 2017). Hence, it is unsurprising that the promotion and augmentation of innovation within teams has recently gained significant attention in both theoretical and practical contexts (Jiang & Chen, 2018).

The mobile communication business in Egypt is widely recognized as one of the most significant sectors in the country. The private sector of Egypt comprises three prominent businesses, namely Vodafone Egypt, Etisalat Egypt, and Orange Egypt. These three firms mostly rely on collaborative efforts to accomplish their primary goals. Therefore, it is imperative to boost their team performance by fostering creativity and actively soliciting input from team members. This input may encompass novel and imaginative ideas, as well as expressions of their requirements.

The importance of innovation for the survival and development of organizations has been well acknowledged in academic literature (Amabile, 1988; Jiang & Chen, 2018; Zacher & Rosing, 2015). While there has been significant scholarly focus on innovation at the individual and firm level (Chen, Zheng, Yang, & Bai, 2016; Damanpour & Schneider, 2006; Gumusluoglu & Ilsev, 2009), the research on team-level innovation remains limited (Eisenbeiss, van Knippenberg, & Boerner, 2008; Tang & Naumann, 2016).

In their study, Ye et al. (2019) provided a comprehensive definition of team innovation, characterizing it as a purposeful endeavor including the introduction and implementation of novel ideas, procedures, and processes within a team setting. The primary objective of team innovation is to yield advantages for the individuals involved, the team as a collective, the organization, and society at large. There is a growing trend in businesses where teams are supplanting individuals as the fundamental units. Enhanced comprehension of vocal communication has the potential to facilitate talent retention and enhance team cohesion inside enterprises (Farndale et al., 2011).

### Literature Review

Identification is defined as a component of an individual's self-concept in which they recognize and value being a member of a team, as well as the sharing of standards and conduct rules that lead to a sense of cohesion and interdependence (Wheelan, 1994; Henry et al. 1999). Identification is an individual's sense of belonging to a social group (Ashforth & Mael, 1989). Identification develops when the team's social bond

strengthens. According to Cross (2000), the output produced by a team is heavily influenced by the strength of identification (loose coupling versus tight coupling) among members.

Team identification refers to how an individual defines himself or herself in terms of his or her participation in a specific team (Carter et al., 2013). According to social identity theory (Tajfel & Turner, 1979), increased team identification leads to positive outcomes such as improved job performance (Cicero, Pierro, & van Knippenberg, 2007), team learning (van der Vegt & Bunderson, 2005), and team innovation (Mitchell, Parker, Giles, Joyce, & Chiang, 2012). In addition, this study looks into how the affective results of team identification influence team and workplace innovation.

Team identification is broken down into three sub dimensions: self-categorization, self-esteem, and team commitment. Richter et al. (2006) contend that "self-categorization theory provides insights into the cognitive mechanisms underlying these dynamics" (p. 1254) of social identity theory in that those who identify with a team have prototypes that direct behaviors, values, and attitudes, and these prototypes are a direct result of the individual's self-categorization as a member of the team. Self-categorization is thought to result in in-group stereotyped (prototypical, normative) behavior and perceptions of self and other in-group members. Self-categorization theory's main contribution is to analyze "social identity salience" (Oakes, 1987; Turner, 1985).

While self-esteem is a personal appraisal of one's worth that is manifested in one's attitudes toward others (Coopersmith 1967). Self-esteem is the evaluative part of self-concept that relates to an overall perception of oneself as deserving or unworthy (Baumeister 1998). Self-esteem is a positive attitude toward oneself that is linked to personal views about talents, abilities, social relationships, and prospective consequences. Self-esteem is the emotional response people have when they consider and assess various aspects of themselves.

Research has shown that commitment in the workplace is a multidimensional phenomenon, with the focus of commitment (i.e., to whom or what an employee is dedicated) being an important feature in judging worker attachment (Becker, 1992). The current emphasis on work teams and participative management systems argues that two significant foci of commitment are an employee's work group or team and the employing organization (Becker, 1992; Hackman, 1987; Reichers, 1985). Team commitment has been associated with extra-role activity (Becker & Billings, 1993; Hackman, 1987) and team performance (Bishop et al., 1997; Hackman, 1987; Scott & Townsend, 1994).

The presence of innovation plays a significant role in enhancing the efficiency, growth, and longevity of businesses (Bagheri et al., 2019; Yoruk et al., 2021). The process of innovation is characterized by nonlinearity, complexity, and tension (Miron et al., 2004; Rosing et al., 2011). The innovation process involves engaging in opposing actions, such as generating creative ideas and subsequently implementing them (Bledow et al., 2011). The effective management of team members necessitates the utilization of two contrasting leadership styles, specifically, opening leadership and close leadership, as a result of the intricate nature of the innovation process (Rosing et al., 2011).

Team innovation encompasses the capacity of a team to produce novel concepts, processes, or offerings (i.e., creativity) and the proficiency to effectively execute these innovative aspects to provide favorable results (i.e., implementation) (West and Farr, 1990; Zacher et al., 2016). The creative process entails the identification of a problem or an opportunity, followed by the generation of innovative ideas to address the problem or capitalize on the opportunity. Hence, it is imperative to engage in exploration activities such as inquiry, discovery, and experimenting in order to foster creativity (Rank et al., 2004). The implementation process entails the assessment of novel ideas and their subsequent application in practical settings. Hence, the implementation necessitates the undertaking of exploitation activities, including efficiency, selection, and refinement, as stated by Rosing et al. (2010). It is worth noting that the processes of invention and implementation do not follow a linear trajectory, but instead unfold in an iterative, chaotic, and dynamic manner. This inherent complexity adds significant intricacy to the innovation process (Anderson et al., 2004).

Peralta et al., (2015) study examined the relationships between team innovation processes and effectiveness (measured as performance and reputation). Furthermore, It investigated the moderating role of two team emergent states: goal clarity and commitment, and affective tone. It found that the relationship between innovation processes and performance is moderated by goal clarity and commitment, such that

the relationship is more strongly positive when goal clarity and commitment is high. Conversely, innovation processes are more positively related to reputation when teams have lower levels of negative affective tone. Implications for research on innovation processes, emergent states, and effectiveness are discussed along with implications for practice.

Davis et al. (2020) investigated how team identification affects students' personal self-esteem, social adjustment, and emotional transition to college in a Division II setting. The Division II setting was chosen because of expected variations in student loyalty to athletic teams at the lower levels of collegiate athletics. Data were collected from undergraduate students at a Division II university and evaluated using confirmatory factor analysis and structural equation modeling. The findings revealed that team identification had no effect on students' personal self-esteem, social adjustment, or emotional adjustment; rather, personal self-esteem had a beneficial impact on students' social and emotional adjustment to college. These findings have major implications for Division II administrators, including the value of intercollegiate athletics in benefiting the larger campus community and how to develop more engaging spectating experiences.

The study conducted by Lin et al. (2022) investigated the impact of empowering leadership on team innovative behaviors within group contexts. The authors also explored the dual effects of team cooperative and competitive orientations on this connection. Utilizing nested data comprising 527 followers nested within 60 departments across 19 Chinese hotels, the findings of this study demonstrate the significant mediating influence of team cooperative attitude on the relationship between empowering leadership and team innovative behaviors. The impact of team competitive orientation on team creative behaviors was found to be tempered by the presence of team cooperative orientation. Specifically, the joint effects of team cooperative and competitive orientations were found to lead to the highest levels of team innovative behaviors.

### **Research Problem**

The research is investigating the impact of team identification on team Innovation.

### **Pilot Study**

The goal of pilot study is to formulate problems, clarify concepts, and form hypotheses. Exploration can begin with a literature search, a focus group discussion, or case studies.

### **The pilot study's objectives were as follows**

- Defining and wording the problem of the research
- Setting the hypotheses of the research
- Identifying the variables of the research
- Exploring the nature of teams in the private mobile communication sector in Egypt.
- Knowing the nature of the effect of team identification on the team innovation in the private mobile communication sector in Egypt.
  - Determining how far official's opinions are varying in respect of the availability of team identification.
  - Suggesting a set of recommendations that may help to improve the team innovation.

### **Sources of information**

The Researcher conducted a pilot study through detailed interviews with two team leaders in Orange Communication Company, five from Vodafone and five from Etisalat they were asked unstructured questions as:

- How do you define team identification concept?
- How do you improve your team innovation techniques?
- How do you increase your team identification?
- Do you feel your team members belong to their teams?
- Do you feel your team members respect each other?
- Do your team members raise suggestions to improve the team's working procedure?

**To reveal the following**

- To what extent the availability of team identification with its dimensions (self-categorization, team self-esteem & team commitment) in the private mobile communication sector in Egypt.
- To what extent they depend on teamwork
- To what extent they are interested in improving their team innovation.

**The results of the pilot study revealed the following**

- The absence of the correct understanding of the concept of team identification and its importance.
- The absence of techniques and approaches to improve the overall team performance.
- Not paying enough attention to the team members' needs and suggestions.
- Lack of pay attention to the team innovation and its importance.

The researcher can summarize the research problem after conducting a pilot study that helped the researcher to identify and understand the nature of working environment and the problems that may face the teams and their members thereafter. And also after presenting the previous studies that indicate (up to the knowledge of the researcher) a research gap especially for the studies related to team identification as the most of the studies applied on sport teams.

Moreover, there is a strong need for further research focusing on innovation within work teams. Furthermore, private mobile communication sector in Egypt is considered from the most important sectors in Egypt, so it is necessary to improve the performance of its teams to can work more effectively and efficiently. Accordingly, the research problem of this study is to investigate the impact of team identification with its dimensions (self-categorization, team self-esteem & team commitment) on team innovation on private mobile communication sector in Egypt.

**Research Objectives**

The research Objectives are addressed as follows:

- Investigating the impact of team identification on the team innovation.
- Exploring the importance of team identification.
- Identifying the factors that affect the innovations of teams.
- Determine the factors that effect on the teamwork.

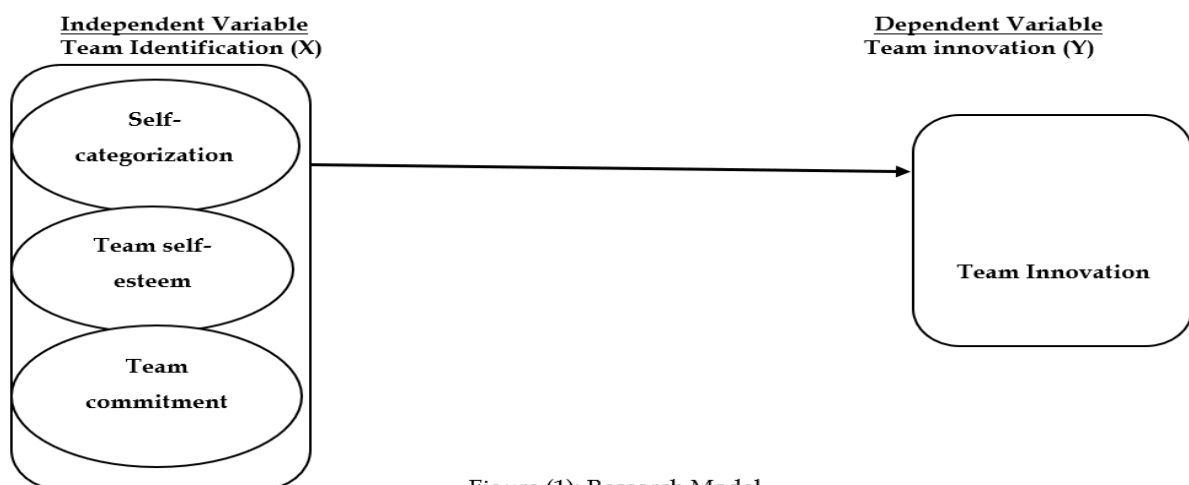
**Research model**

Figure (1): Research Model  
Source: Developed by the researcher

**Research Hypotheses**

Based on the review of the aforementioned studies and pilot study results, the researcher hypotheses are developed as the following:

**H1: There is a direct positive impact of the team identification on the team innovation.**

***Emanates from hypothesis 1 the following sub hypotheses:***

- H1a: There is a direct positive impact of self-categorization on the team innovation.
- H1b: There is a direct positive impact of team self-esteem on the team innovation.
- H1c: There is a direct positive impact of team commitment on the team innovation.

**Research Methodology**

This section addresses research design, research population and sampling, data collection and data analysis

**Research Design**

Can be divided into the following:

**Descriptive study**

Theoretical background of the primary variables of the team commitment, team innovation, were the main manifestations. The theoretical approach will be offered this information was obtained by the researcher through consulting studies, magazines, the internet, and other sources. The researcher used a descriptive method for human sciences and an analytical method for analyzing relationships between variables.

**Empirical study**

Questionnaires were used to collect and record the necessary data from primary sources, and then statistical analysis was used to assess the research hypotheses.

**Research Population and Sampling****Research Population**

The research is concerned with private mobile communication sector in Egypt, as it fosters the information and its role in economic development have been at the core of the Egyptian government policy. It also calls on significant revenue up to an annual EGP 1 billion according to CAPMAS Egypt (2023). There are 3 private companies operating in that sector in Cairo as follows:

1. Orange Egypt
2. Vodafone Egypt
3. Etisalat by e& - Egypt

**Table (6.2.1): Total number of teams & employees in selected companies**

Company name	No. of teams	Total number of employees
Orange Egypt	15	152,000
Vodafone Egypt	11	98,996
Etisalat by e& - Egypt	10	10,000
<b>Total</b>	<b>36</b>	<b>260,996</b>

Source: CAPMAS Egypt 2023

**Research Sample**

The private mobile communications companies consist of many departments which are subdivided into many teams like technical support team, call center team, customer service team and so on. The researcher selected the teams that represent the majority of the employees and are also common between the three companies. The following tables illustrates the numbers of employees and chosen teams.

**Table (6.2.2): Total number of employees inside chosen teams**

Selected teams	Orange Egypt	Vodafone Egypt	Etisalat by e& - Egypt	Total No. of Employees
<b>Technical Support Team</b>	20,000	15,000	400	35400
<b>Call Center Team</b>	30,000	15,000	700	45700

<b>Customer Service Team</b>	20,000	15,000	600	35600
<b>HR team</b>	10,000	5000	300	15300
<b>Total</b>	80,000	50,000	2,000	132000

Source: From the Human Resource department of the selected companies.

### Sample Size

The Sample size is calculated using the following formula 'Robert D. Mason and Douglas A. Lind, 1996':

$$n = \frac{p(1-p)}{\frac{p(1-p)}{N} + \frac{E^2}{SD^2}}$$

**n** : Sample size

**N** : Population size = 10000

**SD** : Standard deviation which is equal to 1.96 at a degree of confidence of 95%

**P** : It is estimated to be equal to 0.5

**E** : Allowable Error and is estimated to be 5%

$$n = \frac{0.5(1-0.5)}{\frac{0.5(1-0.5)}{132,000} + \frac{0.05^2}{1.96^2}} = 383$$

Sample size = 383 Participants.

The research was applied on the private mobile communication sector in Egypt and the researcher has used the judgmental sampling technique that is a type of non-probability/non random sampling techniques which it is a sampling technique where the samples are gathered in a process that does not give all the individuals in the population equal chances of being selected. Non-probability sampling is a sampling technique in which the researcher selects samples based on the personal judgment of the researcher rather than random selection. Judgement Sampling is something which we are having by our own intuition. In judgmental sampling, the samples are selected based purely on researcher's knowledge and credibility (Sisodia, 2019).

In this study the criteria for choosing the sample are:

- Applying only on teams.
- The minimum number of the team members are 20 employees.
- Every employee should tenure with the organization minimum of 3 years.
- Every employee should spend minimum of one year working with his/her team.

After filtering the population and selecting the sample according to the previous criteria which up to the researcher knowledge will represent correctly the population and will achieve the research objectives, the researcher used the simple random sampling technique in distributing the questionnaire among the selected teams in each corporation electronically.

The following table presents the number of responses from each corporation and the total sample size of study according to the valid responses from the teams within each corporation.

**Table (6.2.3): Sample Size**

Corporation	Number of Responses
Orange Egypt	155
Vodafone Egypt	128
Etisalat by e& - Egypt	100
<b>Total Valid Sample size</b>	<b>383</b>

Source: prepared by the researcher.

### Data Collection Technique:

The Research data was collected from the teams inside the private communication companies Orange, Etisalat and Vodafone communication companies.

Team identification. Participants' identification with their team was measured using the 10-item measurement of social identification developed and validated by Ellemers et al.(1999) .. This scale is used to assess the three team identification aspects of self-categorization, team self-esteem, and team commitment. The participants indicated the extent to which they agreed or disagreed with the 10 statements about identification with their teams, Cronbach's alpha for this scale was .87. A sample item is "I would rather belong to another team".

Team innovation was measured using the nine-item developed by Janssen (2001). A sample item is "My team searches out new working methods, techniques, or instruments."

A five-point Likert scale was used for all study measures, with 1 representing strongly disagree and 5 representing strongly agree.

**The following table (9.3) shows the research measures for the questions of the scale used please refer to appendix (1) for the questionnaire**

**Table 6.3 Research Measures**

Variable Name	Measure	Questions number
<b>Team identification</b>	Ellemers et al.(1999)	1,2,3,4,5,6,7,8,9,10
<u>Sub variables</u>		
self-categorization	Ellemers et al.(1999)	1,2,3
team self-esteem	Ellemers et al.(1999)	4,5,6,7
team commitment	Ellemers et al.(1999)	8,9,10
<b>Team innovation</b>	Janssen (2001)	1,2,3,4,5,6,7,8,9

Source: Prepared by the researcher based on the literature review

### Statistical Techniques

The dimensions of the independent variable and dependent variable will be analyzed in order to determine measures of location like mean, maximum and minimum values, and their measures of dispersion, standard deviation and coefficient of variation for each variable.

**Table (7.1): The descriptive Statistics**

Variable	Minimum	Maximum	Mean	Standard Deviation	Coefficient of Variation
Self-categorization	1.00	5.00	3.817	1.234	0.323
Team self-esteem	1.00	5.00	3.824	1.223	0.320
Team commitment	1.00	5.00	3.822	1.211	0.317
Team innovation	1.00	5.00	3.821	1.217	0.319

Source: prepared by the researcher based on SPSS output.

From table (7.1) it is concluded that:

- The independent variable self-categorization has a minimum value of 1.00 and maximum value of 5.00 with an arithmetic mean of 3.817, and its standard deviation is 1.234 which led to a low coefficient of variation of 32.3% which means that there is a low level of dispersion of values around the arithmetic mean.
- The independent variable Team self-esteem has a minimum value of 1.00 and maximum value of 5.00 with an arithmetic mean of 3.824, and its standard deviation is 1.223 which led to a low coefficient of variation of 32% which means that there is a low level of dispersion of values around the arithmetic mean.

- The independent variable Team commitment has a minimum value of 1.00 and maximum value of 5.00 with an arithmetic mean of 3.822, and its standard deviation is 1.211 which led to a low coefficient of variation of 31.7% which means that there is a low level of dispersion of values around the arithmetic mean.
- The dependent variable Team innovation has a minimum value of 1.00 and maximum value of 5.00 with an arithmetic mean of 3.821, and its standard deviation is 1.217 which led to a low coefficient of variation of 31.9% which means that there is a low level of dispersion of values around the arithmetic mean.

### Test of Normality

The researcher applied Shapiro-Wilk test to determine whether the main variables of study follow the normal distribution or not, Shapiro-Wilk test is a Chi-squared test of normality which its null hypothesis states that variables are not normally distributed if the test p-value is less than or equal 0.05, while its alternative hypothesis states that variables are normally distributed if the test p-value is more than 0.05.

Table (7.2): Shapiro-Wilk test of normality.

Variable	Statistic	df	P-value
Team self-categorization	0.825	383	0.000
Team self-esteem	0.823	383	0.000
Team commitment	0.830	383	0.000
Team innovation	0.826	383	0.000

Source: prepared by the researcher based on SPSS output.

From table (7.2) it is concluded that all the independent variable dimensions and dependent variables are not normally distributed as their p-value of Chi-square statistic is less than 0.05, so the alternative hypothesis will be accepted that the variables are not follow the normal distribution.

### Test of Responses Reliability

The term reliability generally refers to the consistency of a measure. The statistical approach to estimating reliability varies depending upon the purpose of the measure.

Cronbach's Alpha test to measure the degree of study variables stability and the following table presents that the stability factor for the sample responsiveness is 99.8% which means that the responses were very high and stable in that questionnaire.

Table (7.3): Cronbach's Alpha Reliability test for variables of study.

Dimension	Number of statements	Cronbach's Alpha	$\sqrt{\text{Alpha}}$
Team self-categorization	3	0.998	0.999
Team self-esteem	4	0.998	0.999
Team commitment	3	0.998	0.999
Team innovation	9	0.998	0.999

Source: prepared by the researcher based on SPSS output.

From table (7.3) it is concluded that there is a high level of reliability for the responses for each variable as the Cronbach's Alpha test show high level of stability as it values for each variable is more than 60% and also for the trust factor which calculated by square root of Alpha factor showed a trust level of more than 99.9%.

### Test of Responses Validity

Validity is the extent to which a concept, conclusion or measurement is well-founded and likely corresponds accurately to the real world based on probability. The validity of a measurement tool is considered to be the degree of probability to which the tool measures what it claims to measure, in this case, the validity is an equivalent to a percent of how accurately the claim corresponds to reality.

Table (7.4): Validity t-test for study variables

Dimensions and variables	t-test	df	P-value
Self-categorization	73.217	375	0.000
Team self-esteem	83.026	375	0.000
Team commitment	90.378	375	0.000
Team innovation	91.693	375	0.000

Source: prepared by the researcher based on SPSS output.

The validation t-test used to measure the extent of statements consistent with the responses in the questionnaire, and from the following table it found that t-test values are all positive and significant as its all *p-value* is equal to 0.0000 and this presents a high level of consistency.

### Correlation Matrix

After applying test of normality for the main dimensions of the independent and the dependent variables of study and founding the study variables don't follow the normal distribution, So Spearman correlation coefficient will be the most appropriate coefficient for determining the relation strength and direction between each two variables, then the correlation coefficient is tested by a t-test which its null hypothesis states that correlation does not exist if the test *p-value* is greater than 0.05.

Table (7.5): Spearman correlation coefficient for the study variables.

Variable	Team self-categorization	Team self-esteem	Team commitment	Team innovation
Team self-categorization	1			
<i>P-value</i>	-			
Team self-esteem	0.990**	1		
<i>P-value</i>	0.000	-		
Team commitment	0.988**	0.987**	1	
<i>P-value</i>	0.000	0.000	-	
Team innovation	0.992**	0.995**	0.990**	1
<i>P-value</i>	0.000	0.000	0.000	-

Source: prepared by the researcher based on SPSS output.

From table (7.5) it is concluded that:

- There is a direct, strong, and significant relation between the independent dimension Team self-categorization and dependent variable Team innovation with correlation coefficient value 0.992 and *p-value* 0.000.
- There is a direct, strong, and significant relation between the independent dimension Team self-esteem and dependent variable Team innovation with correlation coefficient value 0.995 and *p-value* 0.000.
- There is a direct, strong, and significant relation between the independent dimension Team commitment and dependent variable Team innovation with correlation coefficient value 0.990 and *p-value* 0.000.

### Multiple Regression model:

The first main hypothesis of study states that there is a significant impact of team identification dimensions (team self-categorization, team self-esteem, and team commitment) on team innovation, so the researcher will develop multiple linear ordinary least squares (OLS) regression models to test the impact of the for dimensions of the team identification (independent variables) on team innovation (dependent variable).

For the following table (6) presents multiple linear regression models the researcher had accepted the coefficients of independent variables significance at 5% level of significance.

Table (7.6): Multiple regression model for the first hypothesis  $H_1$

Model	OLS Multiple	Dependent variable	Team innovation
Variables	Coefficient	p-value	Significance
Constant	0.259094	0.3320	Insignificant
Team self-categorization	0.516646	<0.0001	Significant
Team self-esteem	0.219719	<0.0001	Significant
Team commitment	0.259094	<0.0001	Significant
Adjusted R-squared		99.43%	

Source: prepared by the researcher based on SPSS output.

From table (7.6) it is concluded that:

- The overall multiple (OLS) regression model is significant, with an adjusted R-squared value of 99.43% which means that the dependent variable team innovation changes by 99.43% due to the changes in the independent dimensions: (team self-categorization, team self-esteem, and team commitment).
- Team self-categorization, team self-esteem, and team commitment have a positive significant impact on team innovation.

The (OLS) regression model forecasting equation will be:

$$\begin{aligned} \widehat{\text{Team innovation}} &= 0.516646 \text{ Team self categorization} + 0.219719 \text{ Team self esteem} \\ &+ 0.259094 \text{ Team commitment} \end{aligned}$$

### Research Findings

The correlation analysis shows that there is a direct and substantial relationship between team identification and its aspects and team innovation. This suggests that team identification has a significant impact on team invention, implying that higher levels of team identification are connected with greater levels of creativity and innovation. This will also be associated with better outcomes, such as team overall satisfaction and high levels of performance. According to the regression model, the hypothesis is accepted, indicating that team identity has a positive direct impact on team innovation. Organizations that rely on teamwork must pay greater attention to team identification in order to get more creative results.

### Recommendations

Organizations that rely on teamwork must prioritize personality assessments and techniques for increasing and maximizing productivity. Team identification plays an important function in the workplace because it increases employee engagement, which fosters innovative behavior. As a result, it is critical to improve and foster a sense of belonging within working teams in order to get more innovative and imaginative products. As a result, mobile communication firms should promote employee identification in order to achieve better and more creative outcomes.

### Suggestions for Future Research

There is potential for similar research in different industries or cross-national comparative studies to learn more about this complicated issue. In addition, the future researchers may examine one of the leadership styles impact as an independent variable on team innovation. Moreover, upcoming research can consider another measurements and instruments for measuring the research variables.

### Conclusion

This study utilizes a sample of teams operating within the communication business. The primary objective of the study was to examine the influence of team identification and its dimensions on team innovation. The study's findings indicate that team identification has a positive and significant impact on team innovation, therefore supporting the research hypothesis. This research adds to the existing body of

knowledge and understanding in the fields of team identification and team innovation. It emphasizes the significance of belongingness behavior in a business setting and highlights its crucial role in improving team outcomes and achieving desired goals. This study focused on the importance of innovation in teams, and the effects of improving innovation reflect on the quality of job completion as well as the organization's time and effort savings.

## References

- Davis, E.A., Hsiao, R., Lower-Hoppe, L.M., Evans, J.O., Blair, E.A. and Alman, R.E., 2020. Impact of team identification on college adjustment in division II college students. *Journal of Issues in Intercollegiate Athletics*, 13(1), p.10.
- Amabile, T.M., 1988. A model of creativity and innovation in organizations. *Research in organizational behavior*, 10(1), pp.123-167.
- Anderson, N., De Dreu, C.K. and Nijstad, B.A., 2004. The routinization of innovation research: A constructively critical review of the state-of-the-science. *Journal of organizational Behavior*, 25(2), pp.147-173.
- Ashforth, B.E. and Mael, F., 1989. Social identity theory and the organization. *Academy of management review*, 14(1), pp.20-39.
- Bagheri, M., Mitchelmore, S., Bamiatzi, V. and Nikolopoulos, K., 2019. Internationalization orientation in SMEs: The mediating role of technological innovation. *Journal of International Management*, 25(1), pp.121-139.
- Baumeister, R.R., 1998. The self (In DT Gilbert, ST Fiske, & G. Lindzey (Eds.). *The handbook of social psychology* (Vol. 1, pp. 680-740). NY: McGraw-Hill.
- Becker, T.E. and Billings, R.S., 1993. Profiles of commitment: An empirical test. *Journal of organizational behavior*, 14(2), pp.177-190.
- Becker, T.E., 1992. Foci and bases of commitment: Are they distinctions worth making?. *Academy of management Journal*, 35(1), pp.232-244.
- Bishop, J.W., Scott, K.D. and Burroughs, S.M., 2000. Support, commitment, and employee outcomes in a team environment. *Journal of management*, 26(6), pp.1113-1132.
- Bledow, R., Frese, M. and Mueller, V., 2011. Ambidextrous leadership for innovation: The influence of culture. In *Advances in global leadership* (pp. 41-69). Emerald Group Publishing Limited.
- Carter, M., Karakitapoğlu-Aygün, Z., Litchfield, R. C., & Hirst, G., 2013. When Team Identity Helps Innovation and When it Hurts: Team Identity and its Relationship to Team and Crossteam Innovative Behavior. *Journal of Product Innovation Management*.
- Jiang, Y. and Chen, C.C., 2018. Integrating knowledge activities for team innovation: Effects of transformational leadership. *Journal of Management*, 44(5), pp.1819-1847.
- Chen, L., Zheng, W., Yang, B., & Bai, S., 2016. Transformational leadership, social capital and organizational innovation. *Leadership & Organization Development Journal*, 37(7), 843-859.
- Cicero, L., Pierro, A., & Van Knippenberg, D., 2007. Leader group prototypicality and job satisfaction: The moderating role of job stress and team identification. *Group Dynamics: Theory, Research, and Practice*, 11(3), 165.
- Coopersmith, S., 1967. *The antecedents of self-esteem*. San Francisco: W. H. Freeman.
- Damanpour, F., & Schneider, M., 2006. Phases of the adoption of innovation in organizations: effects of environment, organization and top managers 1. *British journal of Management*, 17(3), 215-236.
- Dannhauser, Z., & Boshoff, A. B., 2006, August. The relationships between servant leadership, trust, team commitment and demographic variables. In *Servant Leadership Research Roundtable Proceedings*.
- Eisenbeiss, S. A., Van Knippenberg, D., & Boerner, S., 2008. Transformational leadership and team innovation: integrating team climate principles. *Journal of applied psychology*, 93(6), 1438.
- Ellemers, N., Kortekaas, P., & Ouwerkerk, J. W., 1999. Self-categorisation, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology*, 29: 371-389
- Farndale, E., Van Ruiten, J., Kelliher, C., & Hope-Hailey, V., 2011. The influence of perceived employee voice on organizational commitment: An exchange perspective. *Human Resource Management*, 50(1), 113-129.
- Gumusluoglu, L., & Ilsev, A., 2009. Transformational leadership, creativity, and organizational innovation. *Journal of business research*, 62(4), 461-473.
- Hackman J.R., 1987. The Design of Work Teams. In *Handbook of Organizational Behavior* (Lorsch L., ed.), Prentice-Hall, Englewood Cliffs, NJ, pp. 315-342.
- Henry, C. H., Hudson, A. P., Gérard, H., Franco, P. F., & Wolford, L. M., 1999. Identification of *Chlamydia trachomatis* in the human temporomandibular joint. *Journal of oral and maxillofacial surgery*, 57(6), 683-688.
- Hsu, Y. P., Chun-Yang, P., Pi-Hui, T., & Ching-Wei, T., 2019. Managerial coaching, job performance, and team commitment: the meditating effect of psychological capital. *Advances in Management and Applied Economics*, 9(5), 101-125.

- Janssen, O., 2001. Fairness perceptions as a moderator in the curvilinear relationships between job demands, and job performance and job satisfaction. *Academy of management journal*, 44(5), 1039-1050.
- Jiang, Y., & Chen, C. C., 2018. Integrating knowledge activities for team innovation: Effects of transformational leadership. *Journal of Management*, 44(5), 1819-1847.
- Lei, Y., Guo, Y., Zhang, Y., & Cheung, W., 2021. Information technology and service diversification: A cross-level study in different innovation environments. *Information & Management*, 58(6), 103432.
- Lin, M., Zhang, X., Ng, B. C. S., & Zhong, L., 2022. The dual influences of team cooperative and competitive orientations on the relationship between empowering leadership and team innovative behaviors. *International Journal of Hospitality Management*, 102, 103160.
- Lyubovnikova, J., Legood, A., Turner, N., & Mamakouka, A., 2017. How authentic leadership influences team performance: The mediating role of team reflexivity. *Journal of business Ethics*, 141, 59-70.
- Mamakouka, A., Turner, N., Legood, A., & Lyubovnikova, J., 2017. How Authentic Leadership Influences Team Performance: The Mediating Role of Team Reflexivity. How authentic leadership influences team performance: The mediating role of team reflexivity., 59-70.
- Meyer, J. P., & Allen, N. J., 1984. Testing the "side-bet theory" of organizational commitment: Some methodological considerations. *Journal of applied psychology*, 69(3), 372.
- Miron, E., Erez, M., & Naveh, E., 2004. Do personal characteristics and cultural values that promote innovation, quality, and efficiency compete or complement each other?. *Journal of organizational behavior*, 25(2), 175-199.
- Mitchell, R., Parker, V., Giles, M., Joyce, P., & Chiang, V., 2012. Perceived value congruence and team innovation. *Journal of Occupational and Organizational Psychology*, 85(4), 626-648.
- Mowday, R. T., Porter, L. W., & Steers, R.M., 1982. Employee-organization linkages: the psychology of commitment, absenteeism and turnover. New York: Academic Press.
- Neininger, A., Lehmann-Willenbrock, N., Kauffeld, S., & Henschel, A., 2010. Effects of team and organizational commitment-A longitudinal study. *Journal of Vocational Behavior*, 76(3), 567-579.
- Oakes, P. J., 1987. The salience of social categories. In J. C. Turner, M. A. Hogg, P. J. O'Reilly, C. A., & Chatman, J., 1986. Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of applied psychology*, 71(3), 492.
- Pearce, C. L., & Herbik, P. A., 2004. Citizenship behavior at the team level of analysis: The effects of team leadership, team commitment, perceived team support, and team size. *The Journal of Social Psychology*, 144(3), 293-310.
- Peralta, C. F., Lopes, P. N., Gilson, L. L., Lourenco, P. R., & Pais, L., 2015. Innovation processes and team effectiveness: The role of goal clarity and commitment, and team affective tone. *Journal of Occupational and Organizational Psychology*, 88(1), 80-107.
- Rank, J., Pace, V. L., & Frese, M., 2004. Three avenues for future research on creativity, innovation, and initiative. *Applied psychology*, 53(4), 518-528.
- Rank, J., Pace, V. L., & Frese, M., 2004. Three avenues for future research on creativity, innovation, and initiative. *Applied psychology*, 53(4), 518-528.
- Reichers, A. E., 1985. A review and reconceptualization of organizational commitment. *Academy of management review*, 10(3), 465-476.
- Richter, A. W., West, M. A., Van Dick, R., & Dawson, J. F., 2006. Boundary spanners' identification, intergroup contact, and effective intergroup relations. *Academy of Management Journal*, 49(6), 1252-1269.
- Rosing, K., Frese, M., & Bausch, A., 2011. Explaining the heterogeneity of the leadership-innovation relationship: Ambidextrous leadership. *The leadership quarterly*, 22(5), 956-974.
- Rosing, K., Rosenbusch, N., & Frese, M., 2010. Ambidextrous leadership in the innovation process. *Innovation and international corporate growth*, 191-204.
- Schlechter, A. F., & Strauss, J. J., 2008. Leader emotional intelligence, transformational leadership, trust and team commitment: Testing a model within a team context. *SA Journal of Industrial psychology*, 34(1), 42-53.
- Scott, K. D., & Townsend, A., 1994. Teams: Why some succeed and others fail. *HR Magazine*, 39(8), 62-67.
- Sisodia, A., 2019. Sampling Methods. *Think India Journal*, 22(22), 96-110.
- Tajfel, H., & Turner, J., 1979. An integrative theory of intergroup conflict. In J. A. Williams, & S. Worchel, *The social psychology of intergroup relations* (pp. 33-47).
- Tang, C., & Naumann, S. E., 2016. Team diversity, mood, and team creativity: The role of team knowledge sharing in Chinese R & D teams. *Journal of Management & Organization*, 22(3), 420-434.
- Turner, J. C., 1985. Social categorization and the self-concept: a social cognitive theory of group behaviour. In E. J. Lawler (Ed.), *Advances in group processes: theory and research*, (Vol. 2). Greenwich, CT: JAI Press
- Van Dick, R., van Knippenberg, D., Kerschreiter, R., Hertel, G., & Wieseke, J., 2008. Interactive effects of work group and organizational identification on job satisfaction and extra-role behavior. *Journal of Vocational Behavior*, 72(3), 388-399.
- West, M. A., & Farr, J. L., 1990. *Innovation at work*. John Wiley & Sons.

- 
- Wheelan, S. A., 1994. *Group processes: A developmental perspective*. Allyn & Bacon.
- Ye, Q., Wang, D., & Guo, W., 2019. Inclusive leadership and team innovation: The role of team voice and performance pressure. *European Management Journal*, 37(4), 468-480.
- Yoruk, D. E., Bunduchi, R., Yoruk, E., Crişan-Mitra, C., Salanţă, I. I., & Crişan, E. L., 2021. Pathways to innovation in Romanian software SMEs: Exploring the impact of interdependencies between internationalisation and knowledge sources. *Journal of International Management*, 27(4), 100874.
- Zacher, H., & Rosing, K., 2015. Ambidextrous leadership and team innovation. *Leadership & Organization Development Journal*, 36(1), 54-68.
- Zacher, H., Robinson, A. J., & Rosing, K., 2016. Ambidextrous leadership and employees' self-reported innovative performance: The role of exploration and exploitation behaviors. *The Journal of Creative Behavior*, 50(1), 24-46. <https://www.capmas.gov.eg/>
-