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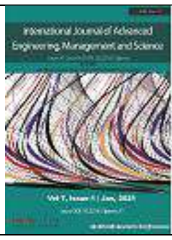

The impact of Psychological Empowerment and Organizational Justice on Perceived Organizational Performance

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***Abstract*— *The study aimed to investigate the influence of psychological empowerment and organizational justice on perceived organizational performance at public sectors in Kurdistan region of Iraq. The research provided empirical evidence regarding the role of psychological empowerment and organizational justice on perceived organizational performance. The current study applied quantitative research, a questionnaire was used to collected data from the participants (employees, supervisors, and managers) from public sector in Kurdistan region of Iraq. The sample size for the current study was 114 units. The study developed two research hypotheses to measure the current study. The findings revealed that the first research hypothesis was supported which stated that psychological empowerment has a positive and significant influence on perceived organizational performance at public sector in Kurdistan region of Iraq, furthermore the second research hypothesis was supported which stated that organizational justice has a positive and significant influence on perceived organizational performance at public sector in Kurdistan region of Iraq. However, it was found that the highest value was for the psychological empowerment effect on perceived organizational performance.*

Keywords*— Organizational Justice, Psychological Empowerment, Organizational Performance.

I. INTRODUCTION

Organizations are currently confronted with challenges such as downsizing, rightsizing, restructuring, privatization, and technological advancement (Maan et al., 2020). These business changes have increased the unemployment rate and unethical practices in organizations, particularly in the context of the KRG (Suifan et al., 2020). Similarly, Yogalakshmi& Suganthi,(2020) has observed an increase in injustice and corruption in the KRG. Furthermore, these business changes have increased job insecurity, injustice, distrust, job dissatisfaction, and performance decline (Farooqi et al., 2019). In today's dynamic business environment, stiff business competition and a high unemployment rate have an impact on employee performance and health at work (Arefinet al., 2019).

The today 's business environment is complex, unpredictable, and chaotic (Tran & Choi, 2019). In this regard, this study seeks to investigate organizational practices and policies that benefit both employers and employees, lead to sense and meaning making at work, and emphasize overall employee upliftment and learning (Aggarwal et al., 2018). As a result, this study considers the KRG organizational setting, which includes organizations of local origin as well as multinational corporations operating in the KRG and employing KRG workers. Performance is defined as (a) the way something or someone functions, operates, or behaves; (b) the way someone does a job, as measured by its effectiveness; and (c) the act of accomplishing something, such as a task or action. Similarly, job performance is a complex concept that includes both task-related and contextual performance factors, as well as the importance of social skills as a predictor of job performance. The extent to which an employee meets the overall performance expectations is defined as job performance (Aggarwal et al., 2020). Job performance, as defined by Chegini et al., (2019), is a set of behaviors that are under an individual's control and affect the goals of the employing organization. Furthermore, Loes & Tobin, (2020), defined job performance as a function that an individual can successfully perform within the constraints and resources that are normally available. The key to developing and improving employees' job performance is identifying the various factors influencing their performance in organizations. Employees in the public sector face a variety of issues unique to their industry, such as low pay, high turnover, and issues with job motivation and performance. Similarly, some studies have found that employees in the public sector have a high turnover rate due to low pay, heavy workloads, poor job performance and learning, and a lack of organizational justice (Khalid et al., 2018). Numerous studies have been conducted to investigate the relationship between job performance, organizational justice, psychological empowerment, and organizational learning in various types of organizations (Asgari et al., 2020). However, the combined effects of organizational justice, psychological empowerment, and organizational learning on the performance of public sector employees had not previously been studied. Examining the root causes of job performance and researching the effects of organizational justice, psychological empowerment, and organizational learning on job performance can provide some understanding of problems with public sector employees as well as potential solutions (Cugueró-Escofet et al., 2019).

Over the last decade, the concept of public sector empowerment has emerged in the context of higher education (Akram et al., 2020). This is due to the benefits it provides to both the public sector and its employees (Waheed et al., 2018). Empowering human resources is regarded as a critical component in the success and achievement of such higher educational institutions in the public sector, as it is in any other workplace. What makes empowerment even more important is that educational institutions may not be able to survive and thrive in the absence of competent and committed staff (AlKahtani et al., 2021). Similarly, Psychological empowerment is an essential component of every organization, and awareness of the importance of OJ is growing in most organizations in order to encourage positive employee behavior. Psychological empowerment is regarded as one of the key elements and factors contributing to overall organizational effectiveness and success in a highly competitive environment (Fragkos et al., 2020). Furthermore, empowerment is one of the most effective ways to improve performance positive attitudes toward their work, including psychological empowerment (Chung, 2018).

A long-term employment bond consists of positive social exchange approaches in the employee–employer relationship, whereby both parties' needs are met (Hamza et al., 2021). The employer is concerned about the employees' devotion, engagement, and trustworthiness toward them in the exchange relationship, while the employees are concerned about whether their employer is keeping their promises by caring for their well-being (Lyu et al., 2019). Ali et al., (2021), stated in their research associates developed the theory of organizational support and the construct of organizational justice in using social exchange theory. Organizational justice is defined as employees' perceptions of the extent to which their contributions at organizations are valued, implying that their associated well-being is fully considered. According to the organizational support theory, individuals form POP, a universal belief that their employer has a favorable or unfavorable attitude toward them. Literature also confirms that individuals' organizational justice helps them to increase their obligations toward organizations in order to reciprocate favorably. They also want to meet their socioemotional needs and incorporate organizational affiliation into their social identity (Farid et al., 2019). Furthermore, existing research indicates that individuals' organizational justice improves both in-role performance such as goal attainment and extrarole performance such as helping and supportive behavior toward coworkers. Researchers have begun to study organizational justice in interpersonal connections with organizations, using social exchange theory as its foundation, and have identified it as a critical component in subordinate–manager relations (Akhtar et al., 2019). According to a meta-analysis conducted by Ahmed & Malik, (2019), favorable treatments such as organizational rewards, favorable working conditions, and fairness received by employees are directly related to perceived organizational performance. Furthermore, organizational justice fosters favorable outcomes such as high job satisfaction, lower turnover, increased dedication, positive emotions, and improved performance. Multi-foci approach to social exchange have highlighted the importance of multiple sources of support, according to which individuals develop distinct give-and-take relationships with varying organizational goals (Nazir et al., 2018). A number of employees–organization-related studies (Khaleghkhah et al., 2018), have found a positive relationship between organizational justice and job satisfaction, performance, organizational justice, and turnover intention. Job satisfaction, innovative work behavior, learning goal orientation, core self-evaluations, and organizational justice are also relevant outcomes for organizational support. Furthermore, the literature shows that organizations achieve positive outcomes when employees perceive superior treatment within the organization (Rehman et al., 2019). Moreover, Psychological empowerment is defined as employees' perceptions of their level of competence, influence, and autonomy in the workplace, as well as the meaning of their job (Kadim et al., 2021). It is the process by which employees gain mastery and control over their lives and develop a critical understanding of their situation. According to Hameed Al-ali et al., (2019), empowered employees at work have increased personal, political, and interpersonal powers that improve their physical and mental health. However, another goal of this study is to look into the relationship between organizational justice and job satisfaction through the role of employees' psychological empowerment and organizational justice. However, understanding the work context that enables empowerment has significant practical and theoretical implications (Hong et al., 2019), but we don't know how or why. This study also looked at whether and how proactive people could be a boundary condition for the impact of organizational justice on psychological empowerment. Furthermore, it investigated how the overall process differs depending on proactive personality levels. Proactive personality refers to an individual's proclivity to take initiative in order to create a positive environment. People with a proactive personality are more likely to be able to effect positive change in the workplace, regardless of the obstacles and constraints they face (Marta et al., 2021). According to proactive personality research, proactive behavior influences meaningful changes in the workplace. Researchers contend that proactive individuals are more likely to be ready for job-related changes, given their proclivity to identify and respond to job opportunities and make changes that align with their interests at work (Haryono et al., 2019). Experiments have shown that proactive individuals can influence vocational adaptability through situations and samples. However, there is a hazy understanding of the underlying mechanisms that cause these effects. Examining these mechanisms will most likely provide future substitutes for intervention for counselors and psychologists (Hameed & Anwar, 2018). These experts, for example, are likely to gain relatively advanced understandings of whether and how proactive employees feel psychologically empowered as a result of these types of mechanisms. Psychological empowerment is an employee's active and lively orientation to their respective role assigned at work, in which empowered employees see their work environment as something that can be shaped by their actions, which arouses their creative behavior, and it serves as a factor that transmits the impact of proactive individuals to job satisfaction. However, the purpose of this study is to investigate how contextual factors such as organizational justice can be linked to overall job satisfaction (Hamad et al., 2021). Second, psychological empowerment is regarded as an important moderator of organizational justice and job satisfaction. In addition, proactive personality moderates the relationship between organizational justice and psychological empowerment. organizational justice is one of the job-related attitudes that has received special attention in organizational behavior research. The current study represented an attempt to contribute to the literature in a variety of ways by establishing the proposed associations in the model. organizational justice is based on organizational support theory (DeConinck et al., 2018), which is also based on social exchange relationships and attribution methods (García-Juan et al., 2020). According to organizational support scholars, employees tend to monitor their situations and make attributions for organizations' generous behaviors. Individuals tend to personify their respective organizations and regard positive and negative treatment from organizational heads as their perception of being favored or disfavored by organizations (Qader et al., 2021). According to research in the field of organizations, there is a reciprocal relationship between individuals and organizations. As a result, rather than focusing solely on the employee side of this relationship, it is critical to consider the organizational support provided to individuals (Maan et al., 2020).

Aim of the study

The current study aimed to examine the influence of psychological empowerment and organizational justice on perceived organizational performance at public sectors in Kurdistan region of Iraq.

Conceptual Framework

Research Model

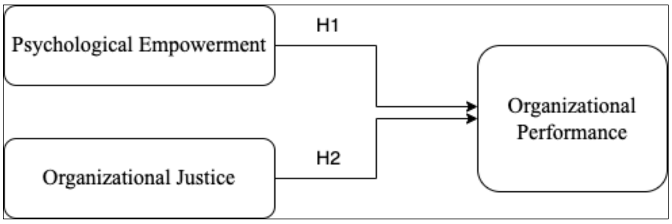

Fig.1: Research Model

Research Hypotheses:

H1: Psychological empowerment has a positive and significant influence on perceived organizational performance at public sector in Kurdistan region of Iraq.

H2: Organizational justice has a positive and significant influence on perceived organizational performance at public sector in Kurdistan region of Iraq.

II. LITERATURE REVIEW

Psychological Empowerment

Psychological empowerment is defined as a motivational process in which people's inherent characteristics, as well as environmental factors, influence their abilities to discover meaning, enhanced competence, and self determination required to influence their environments. The psychological empowerment focuses on the psychological state of employees who are empowered and their reaction to structural empowerment conditions. Psychological empowerment is a four-dimensional construct composed of (a) meaning, (b) competence, (c) self-determination and autonomy, and (d) impact (Suifan et al., 2020).There are related concepts of psychological empowerment presented by various researchers. Earlier research on organizational research focused on empowering as a delegation of power and authority from higher levels of management to lower levels of management. They also improve lower-level employees' access to the organization's knowledge and resources (Yogalakshmi& Suganthi, 2020). However, in recent research, researchers such as Farooqi et al., (2019) supported the idea that this construct of psychological empowerment should be viewed from a different perspective. According to Arefinet al., (2019), these management practices of delegation of authority are one side of those practices that empower employees, but it is not a pet condition. Until recently, little research on empowerment had taken an individual perspective, focusing on the psychological experience of empowerment. Although the concept of empowerment has been discussed and used in the literature for various studies, no detailed definition has been provided. According to Tran & Choi, (2019), this concept is rarely identified and has been taken literally. This is due to the lack of a historical and experimental context for this concept, as well as other organizational concepts. Giving others authority is what empowerment entails. Empowerment should be viewed through the lens of a redistribution model that provides power balance through trust and cooperation protection. Aggarwal et al., (2018) emphasized authority as the focal point of empowerment, allowing staff to make and exert their own decisions. According to Aggarwal et al., (2020), empowerment is defined as the mental relationships between employers and employees. It has been demonstrated that psychological empowerment is related to organizational attitudes and behaviors. The above discussion of various concepts about psychological empowerment demonstrates that it is a very important phenomenon in the field of social sciences and should be thoroughly addressed. Because empowered individuals are more loyal and sincere to the organization and positively contribute to the improvement of organizational performance (Chegini et al., 2019).

Previous theories of psychological empowerment demonstrate the significance of psychological empowerment in business and organizations. Other studies have found that psychological empowerment has a positive impact on job satisfaction, organizational justice, service quality, job performance, effectiveness, and innovative behavior. Additionally, psychological empowerment improves positive work outcomes such as psychological empowerment (Loes & Tobin, 2020). Khalid et al., (2018) stated that psychological empowerment positively influences pschological empowerment in an empirical study. The study found that the higher the level of psychological empowerment of employees, the more motivated they are to perform well at work. Employees are also motivated to demonstrate more OJ, despite their positive feelings about psychological empowerment. Similarly, Asgari et al., (2020) investigated the relationships between organizational justice, psychological empowerment, organizational justice, job satisfaction, and OJ. According to the findings, psychological empowerment was positively related to job satisfaction, organizational justice, and pschological empowerment. Kwantes & Bond, (2019) also conducted a study to investigate the impact of psychological empowerment on work outcomes such as Pschological empowerment. The findings revealed a significant link between psychological empowerment and OJ. Thus, when psychological empowerment acts as a moderator, there is a significant relationship between transformational psychological empowerment and OJ. Organizational justice can have a significant impact on psychological empowerment components (Cugueró-Escofet et al., 2019). According to the organizational support theory, employees develop a sense of how much the organization values their contribution and cares about their well-being. Organizational justice was a significant predictor variable of OJ (Akram et al., 2020).

Organizational Justice

Organizational justice is an important topic in the field of organizational behavior because it is meaningful to and has a significant impact on organizational members. Organizational justice refers to the perceived fairness in a variety of decision-making processes and outcomes by employees within an organization. Furthermore, organizational justice is defined as the extent to which organizational members believe the rewards they receive (distributive justice) and the methods and procedures used to determine the quantity of such rewards (procedural justice) are fair (Waheed et al., 2018).

OJ has been extensively researched in the fields of organizational behavior and applied psychology (AlKahtani et al., 2021). Fragkos et al., (2020) introduced the concept of OJ briefly with the goal of measuring the level of performance. OJ is based on the concept of equity theory. Employees typically perceive cognitive conflict when they believe that things or procedures are based on unfairness. According to Chung, (2018), the concept of OJ is based on three key components: process, outcomes, and interpersonal relationships. Employees, according to OJ's theory, are constantly measuring and comparing their "inputs" with their "outputs." Previous research has classified OJ into four subtypes: distributive, informational, procedural, and interpersonal. OJ, on the other hand, is broadly defined and applied in three dimensions: distributive, interactional, and procedural justice. To begin, distributive justice emphasizes the fairness of outcomes. Second, procedural justice demonstrates the fairness and consistency in rewarding procedures for all parties. Third, interactional injustice demonstrates their employer's fairness in receiving information and interpersonal treatment. OJ lays the groundwork for a healthy working environment and helps organizations retain loyal human capital. As a result, OJ benefits employees, organizations, and societies in equal measure. The existing literature has discovered links between OJ and job-related outcomes (for example, pay satisfaction, performance, trust, and organizational justice) in the workplace (Hamza et al., 2021). Employees who perceive injustice in the workplace may be dissatisfied with their jobs, call in sick, exhibit lower levels of justice, and eventually seek to quit. Another study discovered that performance appraisal system standards align with employees' competencies, skills, and goals to increase job satisfaction in the workplace (Lyu et al., 2019). There has been little research into how perceptions of OJ practices reduce levels of job dissatisfaction among employees in developing countries' private and public sectors. Ali et al., (2021) distinguished between two types of empowerments: physiological empowerment and structural empowerment. Structural empowerment refers to a set of practices for accessing information and learning in the workplace, whereas psychological empowerment refers to a motivational feeling based on four cognitions: competence, meaning, self-determination, and impact. Physiological empowerment occurs when organizational members or employees perceive control over their working lives, according to Farid et al., (2019), empowered employees believe that their work lives are important and that they care about what they do at work. According to researchers, physiological empowerment can increase motivation and a sense of personal control, which can lead to positive organizational and managerial outcomes in the workplace. In recent research, psychological empowerment has been used as an independent variable (Akhtar et al., 2019). Ahmed & Malik, (2019) conducted research on the moderating effects of psychological empowerment on the relationship between organizational trust and employee engagement. As stated in the preceding discussion, no study has been discovered that investigates the interactive role of psychological empowerment on the relationship between OJ and the level of job dissatisfaction in either developed or developing countries.

The concept of OJ is based on the Equity Theory, which states that people compare themselves to others in terms of their outcomes and inputs, and then use ratios to assess the equity of input and output. Furthermore, theory proposes that people avoid inequitable and unjust relationships; thus, they maintain only equitable and fair relationships with one another. Employees of the firm want the relationship and resources distributed among people to be unbiased and not favor any individual or group over others (Qader et al., 2021). When an employee of a firm perceives that the ratio of his or her input and output is equal to others, the spirit of Equity Theory exists (DeConinck et al., 2018). When inequity arises as a result of under or overcompensation, it can cause stress, tension, or anger in the individual, resulting in poor performance and behavior. According to García-Juan et al., (2020) research, OJ is required for employee satisfaction and proficiency in JP. According to Fernandes and Awamleh (2006), fair treatment of employees is referred to as OJ, which typically includes three dimensions that are described as follows: procedural justice, interactional justice, and distributive justice (Maan et al., 2020).

- **Procedural Justice**

Procedural justice refers to the procedures that a company follows when making a decision. Suifan et al., (2020) defined procedural justice as the firm's method of implementing relevant decision-making criteria. According to Yogalakshmi& Suganthi, (2020) research, procedures are perceived as fair when they are applied consistently over time and across people.

- **Interactional Justice**

The second type of OJ is Interactional Justice, which was introduced by Farooqi et al., (2019) with the goal of focusing on the quality of fairness people receive when they are treated procedurally or when procedures are implemented. According to Arefinet al., (2019), issues with interactional justice arise when employees are judged unfairly, treated disrespectfully, and lied to.

- **Distributive Justice**

According to Tran & Choi, (2019), Distributive Fairness is an employee's perspective on how his or her outcome compares to the outcome of another employee. According to Aggarwal et al., (2018), distributive fairness is the employees' perception of how fair the actual outcome has been distributed.

Organizational Performance

After reviewing a large amount of research literature, it was discovered that organizational performance had been measured using a variety of indicators. Aggarwal et al., (2020) used perceptual measures of organizational performance, Chegini et al., (2019), used profitability ratios and liquidity ratios to measure the financial performance of the firm, (Loes & Tobin, 2020), practiced sales based or value added in the products of the organization by each employee, and Khalid et al., (2018), used performance measured in physical form. Asgari et al., (2020), discovered in his research that there is a disadvantage to this approach because it is highly subjective for the individual to find improvements in the organization in which the individual is working as well as the individual's own performance, and collecting information about the performance of a rival firm. As a result, managers were required to develop standards to compare the performance of their own firm to the performance of previous years in order to determine the perceived performance of the firm and the performance of the individual at the same time. The current theoretical efforts on resource-based firm observation support the concept that appropriate human resource practices may be a substantial base of "competitive advantage" and claim that all valuable and productive organizational resources lead to sustainable competitive advantage. According to resource-based theory, these foundations of value are increasingly available to almost everyone somewhere and are simple to replicate, particularly when compared to complex social arrangements such as human resource systems. According to Kwantes & Bond, (2019), good human resource management practices improve organizational performanceby improving "employee attitudes, skills, abilities, knowledge, motivation, and working patterns. Several authors in the research field have discovered that there are relationships between individuals' HRM practices and firm performance in the market. According toCugueró-Escofet et al., (2019), human resource practices were directly related to all dimensions of the firm's market performance. Perceived organizational performance is measured by employees' perceptions of their firm's performance in comparison to the firm's financial position in previous years.

Many studies have been conducted to demonstrate the number of factors that predict organizational performance. For example, Akram et al., (2020) discovered that organizational performance is significantly related to organizational justice. Similarly, Waheed et al., (2018) found that employee JP rises when they believe their organization will support them. AlKahtani et al., (2021) found that JP and organizational justice of employees are both positively and significantly correlated. Many subsequent research studies have also confirmed the positive relationship between organizational justice and organizational performance (Fragkos et al., 2020). Chung, (2018) found a significant relationship between organizational justice and employee organizational performance. Organizations can improve their performance by focusing on the needs of their employees. Employees are motivated when they believe their organization is assisting them and they reciprocate by producing high-quality results (Hamza et al., 2021). Employees increase their sense of responsibility by using their full potential to help their organization (Hameed & Anwar, 2018). The existing research literature also suggests that there is a positive and significant relationship between organizational justice and performance (Hamad et al., 2021).

Relationship Between Psychological Empowerment and Organizational Performance

According to DeConinck et al., (2018), competency is defined as an individual's feeling that leads to good work performance. In other words, competency refers to a person's assessment of his or her ability to perform work tasks proficiently. The degree to which people care about their work is defined as meaning. The alignment of an individual's ideals or values with the value of the work is referred to as meaning. The degree to which workers have control over their work or are free to choose how to complete their tasks is defined as self-determination(Qader et al., 2021). In addition, selfdetermination refers to a person's perception of choice in initiating behaviors and making decisions at work. The degree to which people believe they have significant influence on their immediate work environments, coworkers, and the organization as a whole is referred to as impact. In fact, the impact is perceived as the extent to which the behavior is seen as making a difference in terms of achieving the task's goal. The literature describes the consequences of psychological empowerment as positive behavioral effects that lead to improved work performance. The concept of empowerment can be defined as explaining how and why an employee's job can act as a motivator to energize, direct, and sustain employee behaviors that are ultimately associated with both task and contextual job performance (Hamza et al., 2021). According to Ali et al., (2021), when employees feel they have control over their work, their performance improves. Many studies have found that psychological empowerment leads to increased work effectiveness, achievement and success, improved performance, justice, and satisfaction. For example, Lyu et al., (2019), investigated the effects of psychological empowerment on the management of strategic business units. According to Hall's [25] findings, psychological empowerment influenced managerial performance positively. Fulford and Enz [26] studied the extent to which self-efficacy, impact, and meaning explained employee perceptions of satisfaction, loyalty, overall work performance, level of services provided to members, and concern for others by collecting data from service employees in thirty private clubs. Furthermore, Farid et al., (2019), demonstrated that individuals who feel more meaning in their work put forth more effort and justice to their tasks, resulting in high performance.

Relationship Between Organizational Justice and Organizational Performance

According to Nazir et al., (2018), organizational justice receives a great deal of attention in managerial and psychological research. Organizational justice refers to employees' perceptions of fairness in organizational behavior. According to previous research by various researchers and scholars, there are three types of organizational justice: distributive, procedural, and interactional justice (Khaleghkhah et al., 2018). According to Rehman et al., (2019), distributive justice is a term that describes how people perceive justice based on the consequences they receive. People's perceptions of the procedures to which the consequences belong are central to procedural justice. Interactional justice, as defined by Kadim et al., (2021), is the quality of interpersonal interactions between organizational decision-makers during organizational procedures. These three dimensions of justice interact with one another to form the perceived justice for workers in the workplace. The information of distributive, procedural, and interactional justice is processed for making and revising total justice judgments, according to the theory of justice. Other attitudes such as job satisfaction, OJ, organizational justice, organizational trust, and aggressive behavior are also influenced by organizational justice, according to this theory. Perceived justice, according to Hameed Al-ali et al., (2019), is an important factor in distinguishing more empowered (psychologically) from less empowered groups. Hong et al., (2019) explained in an article discussing the past, present, and future of organizational justice that there are many variables related to organizational behavior. The research on organizational justice may be able to explain the outcome. Because it is directly related to the workplace, organizational justice is a conceptual term used in literature to explain the contribution of fairness. Most importantly, organizational justice is concerned with how employees perceive whether or not they are treated fairly in their jobs within the organization. Employees also consider how these decisions affect other variables related to work (Marta et al., 2021). According to Haryono et al., (2019), organizational justice can assist in explaining why employees react to unfair results or unsuitable procedures and interconnections.Similarly, organizational justice refers to how much one perceives the ratio between inputs (e.g., knowledge, time, experience, efforts) invested in his job and outputs (e.g., wage, recognition, compliment, job security) to be reasonable in comparison to others (Hameed & Anwar, 2018). Organizational justice benefits members by increasing their enthusiasm for their jobs in proportion to the reasonable treatment and rewards they receive from their organizations, and their job satisfaction rises accordingly (Hamad et al., 2021).

III. RESEARCH METHODOLOGY

the current study applied quantitative research method to examine the influence of psychological empowerment and organizational justice on perceived organizational performance at public sector in Kurdistan region of Iraq. A questionnaire was used to collected data from the participants (employees, supervisors, and managers) from public sector in Kurdistan region of Iraq. The study aimed to gather 130 questionnaires, but only 114 questionnaires were received from the participants, therefore the sample size for the current study was 114 units to measure the influence of psychological empowerment and organizational justice on perceived organizational performance at public sector in Kurdistan region of Iraq. A questionnaire was adopted from academic sources and was distributed via printed hard copies to the participants.

IV. ANALYSIS AND FINDINGS

Table 1: Bartlett test and KMO

Variables	Number of Items	n	KMO	Bartlett test	
				Chi-Square	Sig.
Psychological Empowerment	9	114	.711	2.091	.000
Organizational Justice	9	114			
Organizational Performance	12	114			

As we can see in table (1), the result of KMO for all independent variables (Psychological empowerment and organizational justice), and perceived organizational performance as dependent variable r; is .711 which is higher than .001 this indicates that the sample size used for the current study was more than adequate. Furthermore, the result of Chi-Square is 2.147 with the significant level .000.

Table 2: Reliability Statistics

Factors	Cronbach's Alpha	N of Items
Psychological Empowerment	.739	9
Organizational Justice	.747	9
Organizational Performance	.756	12

Table (2) shows the reliability statics analysis. The researcher used independent factors psychological empowerment and organizational justice) on the other hand, one dependent factor (perceived organizational performance). In terms of psychological empowerment as independent factor, the Cronbach's Alpha =.739 for 7 items, since (.739<.6) therefore 9 questions used to measure psychological empowerment were reliable. In terms of organizational justice as independent factor, the Cronbach's Alpha =.747 for 9 items, since (.747<.6) therefore 9 questions used to measure organizational justice were reliable, and concerning perceived organizational performance as independent factor, the Cronbach's Alpha =.756 for 12 items, since (.756<.6) therefore 12 questions used to measure dependent variable (perceived organizational performance) were reliable.

Examine Research Hypothesis (1)

Table 3: Correlations Analysis between psychological empowerment and perceived organizational performance

Items	Pearson Correlation	Psychological empowerment	Organizational performance
Psychological empowerment	Pearson correlation	1	
	Sig. (2-tailed)		
	N	114	
Organizational performance	Pearson Correlation	.722**	
	Sig. (2-tailed)	.000	1
	N	114	104

**. Correlation is significant at the 0.01 level (2-tailed).

As seen in the above table, the Pearson Correlation between psychological empowerment and perceived organizational performance = .722** (Correlation is significant at the 0.01 level, 2-tailed), therefore there is a strong positive correlation between psychological empowerment and perceived organizational performance at public sector in Kurdistan region of Iraq.

Table 4: Model Summary between psychological empowerment and perceived organizational performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.801a	.719	.727	.21029
a. Predictors: (Constant), psychological empowerment				

Table (4), shows the value of R square = .719, which indicates that 72% of the variables have been explained.

Table 5: ANOVA between psychological empowerment and perceived organizational performance

Model		Sum of squares	Df	Mean Square	F	Sig.
	Regression	39.901	5	11.9122	101.212	.000b
1	Residual	3.912	101	.039		
	Total	43.813	106			

a. Dependent Variable: Perceived organizational performance

b. Predictors: (Constant), Psychological empowerment

Table (5) shows the value of F for four independent factors and a dependent factor is 101.212>1 which indicates there is a significant association between independent factor (psychological empowerment) and dependent factor (Perceived organizational performance).

Table 6: Simple Regression Analysis between psychological empowerment and perceived organizational performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
1		B	Std. Error	Beta		
	(Constant)	.299	.137		1.812	.12
	Psychological empowerment	.714	.041	.721	.819	.000

a. Dependent Variable: Perceived organizational performance

As seen the result of simple regression analysis, the value B for psychological empowerment factor is .714 (.714>0.01) therefore first research hypothesis was supported which stated that psychological empowerment has a positive and significant influence on perceived organizational performance at public sector in Kurdistan region of Iraq.

Examine Research Hypothesis (2)

Table 7: Correlation Analysis between organizational justice and perceived organizational performance

Items	Pearson Correlation	Organizational Justice	Organizational performance
Organizational Justice	Pearson correlation	1	
	Sig. (2-tailed)		
	N	114	
Organizational performance	Pearson Correlation	.701**	
	Sig. (2-tailed)	.000	1
	N	114	104

**. Correlation is significant at the 0.01 level (2-tailed).

As seen in the above table, the Pearson Correlation between organizational justice and perceived organizational performance = .701** (Correlation is significant at the 0.01 level, 2-tailed), therefore there is a strong positive correlation between organizational justice and perceived organizational performance at public sector in Kurdistan region of Iraq.

Table 8: Model Summary between organizational justice and perceived organizational performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.792	.699	.708	.29121
a. Predictors: (Constant), organizational justice				

Table (8), shows the value of R square = .699, which indicates that 70% of the variables have been explained.

Table 9: ANOVA between organizational justice and perceived organizational performance

Model		Sum of squares	Df	Mean Square	F	Sig.
	Regression	33.191	3	10.121	122.321	.000b
1	Residual	2.899	94	.029		
	Total	36.09	97			

a. Dependent Variable: Perceived organizational performance

b. Predictors: (Constant), Organizational Justice

Table (9) shows the value of F for four independent factors and a dependent factor is 122.321>1 which indicates there is a significant association between independent factor (organizational justice) and dependent factor (Perceived organizational performance).

Table 10: Simple Regression Analysis between organizational justice and perceived organizational performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
1		B	Std. Error	Beta		
	(Constant)	.231	.104		1.722	.009
	Organizational justice	.699	.039	.704	.901	.000

a. Dependent Variable: Perceived organizational performance

As seen the result of simple regression analysis, the value B for organizational justice factor is .699 (.699>0.01) therefore second research hypothesis was supported which stated that organizational justice has a positive and significant influence on perceived organizational performance at public sector in Kurdistan region of Iraq.

V. CONCLUSION

The study aimed to investigate the influence of psychological empowerment and organizational justice on perceived organizational performance at public sectors in Kurdistan region of Iraq. In order to improve organizational performance, organizations should increase their spending on research and development. The research provided empirical evidence regarding the role of psychological empowerment and organizational justice and its influence of perceived organizational performance.The study attempted to offer leaders in the KRG research public sector a strategy that improves the psychological empowerment of staff in order to maintain employees' high sense of citizenship behavior to the public sector, which in turn will improve KRG's performance.The study developed two research hypotheses to measure the current study. The findings revealed that the first research hypothesis was supported which stated that psychological empowerment has a positive and significant influence on perceived organizational performance at public sector in

Kurdistan region of Iraq, furthermore the second research hypothesis was supported which stated that organizational justice has a positive and significant influence on perceived organizational performance at public sector in Kurdistan region of Iraq.

However, it was found that the highest value was for the psychological empowerment effect on perceived organizational performance. The future of organizations is dependent on their employees' work behavior. Organizational top management should maintain a healthy working environment by promoting OJ practices and empowering employees to increase their levels of motivation and performance in the workplace. To ensure and maintain an optimal level of job satisfaction, top management in the public sector should emphasize justice practices in the workplace. According to the findings of this study, OJ such as distributive, interactional, and procedural justice can reduce job dissatisfaction in the workplace. Furthermore, psychological empowerment programs can play an important role in motivating employees to face workplace business changes.This research has scholarly ramifications. The conventional vertical relationship between psychological empowerment and organizational justice, psychological empowerment and organizational justice, has been well documented. However, the relationship between horizontal shared psychological empowerment and organizational justice, as well as psychological empowerment and organizational justice, has received little attention. Notably, the questionnaire items for this study were developed based on the literature and surveyed corporate practitioners. Organizational justice is required to achieve high performance in a company. It is advisable to identify and distribute various factors that can improve organizational justice to members. This study also demonstrated the important relationship between shared psychological empowerment and psychological empowerment and organizational justice, which will serve as a guideline for future organizational justice. Despite the implications mentioned above, this study has limitations. Except for organizational justice, which is a variable involving organizational effectiveness, it failed to take into account variables such as job performance, pschological empowerment, and organizational performance. Future research should further analyze and consider various variables, as well as compare local findings to those from other countries.

VI. LIMITATIONS AND FUTURE DIRECTIONS

There were numerous limitations to the research while it was being conducted. The first is a sample size limitation. A large enough sample size should be considered for more accurate results. Second, respondents have a lack of understanding of the concepts raised in the questions. Third, organizational performance was measured based on employee perception, which may result in biased and erroneous results. This research was carried out in a developing country where organizations were not fully implementing management policies and practices discussed in the literature. In the future, much attention will be required to test such concepts in other fields of industry. The current study was conducted in the public sectoring sector. Future research should include other industries such as services and manufacturing and private sectors.

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Factors affecting Suppliers' Refusal to Participate in Public procurement through Competitive Bidding

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Abstract— *This study identified factors of the procurement process and policies that affected suppliers' decisions to refuse to participate in public procurement. The assessment of discernment is in the extent of suppliers' company profiles and the procurement process and policies based on the 2016 Revised Implementing Rules and Regulations of Republic Act 9184. The study used a descriptive research design. A simple random sampling method was used to selected participants for the study. A combination of a checklist, free and scaled response questionnaire was used to collect responses. The researchers were able to disseminate questionnaires to the suppliers of different government agencies in the vicinity of the Science City of Muñoz, Nueva Ecija. The study revealed that a huge number of the surveyed suppliers felt that participation in public procurement through a competitive bidding process would entail them with more obstacles and challenges than some alternative types of procurement. The study also found that the three most-cited factors affecting suppliers' decisions to refuse in participating: the approved budget for the contract is usually too low, the time frame for the delivery is usually too short, and the process is too long.*

Keywords— ***Competitive bidding, policies, public procurement, RA 9184, suppliers.***

I. INTRODUCTION

The Philippine government spends hundreds of billions of pesos on products and services to run the bureaucracy, complete projects, and provide services to its people, from paper and pens, chairs, and tables, to mobility items, IT systems, security contracts, and even the needs for combating the ongoing COVID19 pandemic, including vaccines and personal protective equipment. According to the World Bank, for the past four years, an average of P121 billion worth of infrastructure, equipment, materials, supplies, and services were procured each year, which accounts for 15% of the country's annual budget and all passes through government procurement processes, making procurement markets a unique pool of business opportunities for the private sector.

The Philippine government procurement system is being guided by Republic Act 9184 and its Implementing Rules and Regulations (IRR), otherwise known as the Government Procurement Reform Act (GPRA) of 2003. In recent years, the government has introduced several measures to reform procurement to respond to the long-standing failings in public procurement in the Philippines, including a lack of transparency and competition.

Competitiveness is one of the governing principles of government procurement, which is stated in the revised 2016 IRR of RA 9184. Both the GPRA and the IRR stipulate open competitive bidding, also known as public bidding, as the standard method of public procurement, while the IRR also states that the bids and awards committees shall evaluate all bids on an equal footing to ensure fair and competitive bid comparison. A competitive bidding process treats bidders equitably and provides fairgrounds for competition among themselves, thus encouraging more bidder participation.

The high number of participating bidders in public procurement is important because it allows competition among proponents to urge them to offer more beneficial terms to the government.At the 2017 forum entitled "Market Procurement Opportunities Summit," Atty. Dennis Santiago, the former Executive Director of GPPB-TSO, mentioned that the zealous participation of the private sector in public bidding ensures that the government gets value for its money. However, in the focus group discussion results conducted in 2014 for the different government agencies by the Government Procurement Policy Board (GPPB), the governing body for all public procurement, it is found that low numbers of participating bidders contribute to the causes of delays in procurement, which can result in further losses on the part of the government.

Specifically, the study was intended to:

a).Describe the existing government procurement process and policies, specifically through competitive bidding method

b). Describe the suppliers' profile and perceptions in participating in competitive bidding.

c). Identify the specific attributes in the existing procurement process that most affect suppliers' decisions to refuse to participate in competitive bidding.

II. METHODOLOGY

A descriptive research design was used for this study to describe the situation systematically. A combination of a checklist, free and scaled response questionnaire were used by the researcher to collect responses. According to Dr. Y.P. Aggarwal (2008) as cited by Salaria (2012) “descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. This type of research design is not simply amassing and tabulating facts but includes proper analyses, interpretation, comparisons, identification of trends and relationships” (Garcia, et al, 2019). And for this study, a simple random sampling was used to select respondents, who are the suppliers.“In a simple random sampling, every member of the population has an equal chance of being selected as respondents” (McCombes, 2019). The researchers were able to disseminate questionnaires to the suppliers of different government agencies in the vicinity of the Science City of Muñoz, Nueva Ecija.

III. RESULTS AND DISCUSSION

3.1 The existing procurement process and policies through the competitive bidding method

Competitive bidding is one of the several methods in conducting public procurement. In Article IV Sec. 10 of Republic Act No. (R.A.) 9184, it is stated that all procurement shall be done through competitive bidding, except as provided for in Article XVI of this Act. Competitive bidding refers to a method that is open to participation by any interested party and which consists of the following processes: pre-procurement conference, advertisement, pre-bid conference, receipt and opening of bids, evaluation of bids, post-qualification, and award of contract. Prior to the advertisement or the issuance of the Invitation to Bid/Request for Expression of Interest for each procurement undertaken through competitive bidding, the Bids and Awards Committee (BAC), through its secretariat, will call for a pre-procurement conference. During the pre-procurement conference, the participants, led by BAC, confirm the description and scope of the contract, the approved budget for the contract, and the contract duration. After the pre-procurement conference is done, the next step is the advertisement. Procuring entities are mandated to post their bid opportunities on the PhilGEPS website, the procuring entity's website, and in any conspicuous place of the procuring entity concerned. Seven (7) calendar days from the PhilGEPS posting of the Invitation to Bid or Bidding Documents, the pre-bid conference will be held, In the pre-bid conference, it discusses, clarifies, and explains, among other things, the eligibility requirements and the technical and financial components of the contract to be bid, including questions and clarifications raised by the prospective bidders before and during the pre-bid conference. Twelve (12) calendar days after the pre-bid conference, the submission and opening of bids are next. Bidders shall submit their bids through their duly authorized representative using the forms specified in the bidding documents in two (2) separate sealed bid envelopes. The first envelope shall contain the following technical information/documents, at the least: PhilGEPS Certificate of Registration and membership; Statement of all Ongoing Government and Private Contracts; Statement of Single Largest Completed Contract, Net Financial Contracting Capacity; Computation or committed Line of Credit; JVA or the Duly Notarized Statement (if applicable), Bid security in the prescribed form, amount, and validity period; Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales service/parts, if applicable and Omnibus Sworn Statement. The second envelope shall contain the financial information/documents as specified in the

Philippine Bidding Documents. All bids shall be accompanied by a bid security, payable to the procuring entity concerned, as a guarantee that the successful bidder shall, within ten (10) calendar days from receipt of the notice of award, enter into a contract with the procuring entity and furnish the performance security required in Section 39 of IRR. After the deadline for the submission and receipt of bids, the BAC shall open the bids immediately. The time, date, and place of the opening of bids shall be specified in the Bidding Documents. The BAC shall open the first bid envelopes in public to determine each bidder's compliance with the documents required to be submitted for eligibility and for the technical requirements. For this purpose, the BAC shall check the submitted documents of each bidder against a checklist of required documents to ascertain if they are all present, using a non-discretionary "pass/fail" criterion, as stated in the Instructions to Bidders. If a bidder submits the required document, it shall be rated "passed" for that particular requirement. In this regard, bids that fail to include any requirement or are incomplete or patently insufficient shall be considered as "failed." Otherwise, the BAC shall rate the said first bid envelope as "passed." The Lowest Calculated Bid ("LCB")/Highest Rated Bid ("HRB") shall undergo post-qualification in order to determine whether the bidder concerned complies with and is responsive to all the requirements and conditions as specified in the Bidding Documents. The BAC will recommend to the Head of the Procuring Entity the award of contract to the bidder with the LCRB/HRRB or the Single Calculated/Rated Responsive Bid after the post-qualification process has been completed. Notwithstanding the issuance of the Notice of Award, the award of the contract will be subject to the posting of performance security in accordance with Section 39 of IRR. (2016 Revised IRR of RA9184). And for the overall operational timeline, the recommended earliest possible time is 24 days, and the maximum period allowed is 119 days.

3.2 Suppliers' perception of the existing procurement process, specifically of the competitive bidding method. Procurement process attributes that affect a supplier's decision to participate in public bidding.

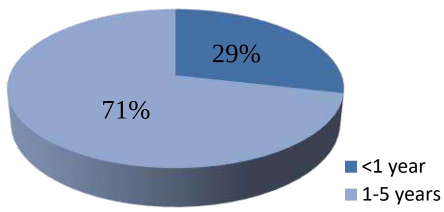

Fig1. Suppliers years selling to government

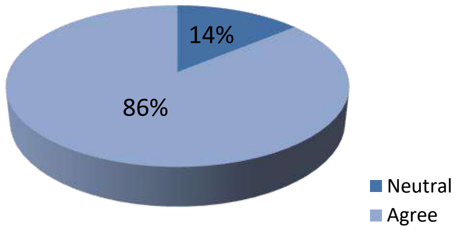

Fig.2. Suppliers' perception of how competitive bidding gives them more difficulties and challenges

Figure 1 reflects that 71% of the total surveyed suppliers were selling to the government for 1–5 years, while 29% of them were for less than a year.From the total number of suppliers who have been selling for 1-5 years, 86% of them (shown in Figure 2)agreed that participating in public procurement through competitive bidding gives them more difficulties and challenges (Abelardo, et al, 2019) compared to the other modes of procurement.

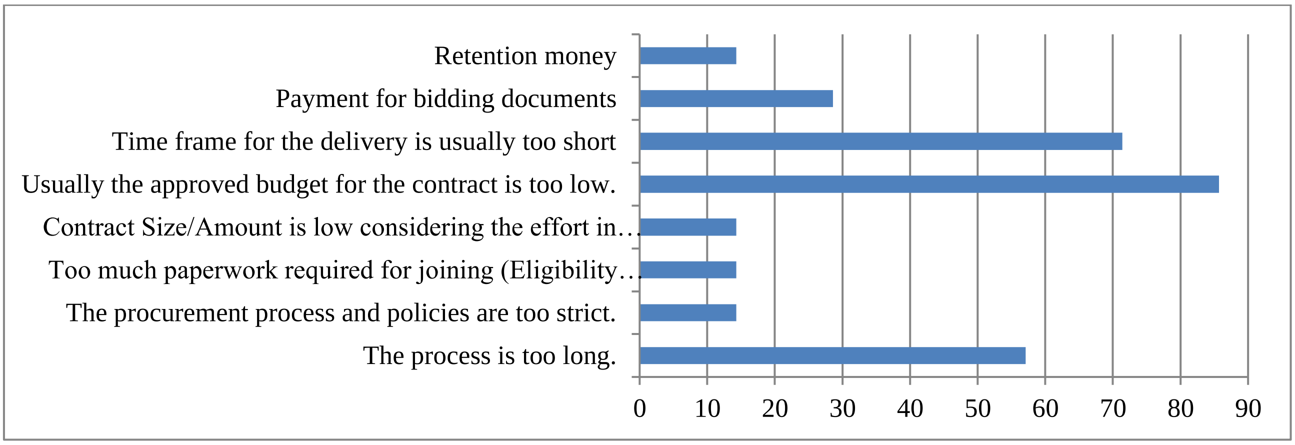

Fig.3. Attributes in the competitive bidding process and policies.

Figure 3 shows the attributes in the competitive bidding process and policies that got the highest percentage in affecting suppliers' decisions to refuse to participate. From the total number of suppliers who have been selling to the government for 1–5 years and who also agree that participating in competitive bidding causes more difficulties. It can be noted that the 3 attributes that got the highest percentage were the following: approved budget for the contract is too low (85%), the time frame for the delivery is usually too short (71%), and the overall process is too long (57%).

IV. CONCLUSIONS AND RECOMMENDATIONS

Based on the data gathered, it is found that the majority of suppliers who have already been selling to the government for 1–5 years agree that participating in public procurement through competitive bidding gives them more difficulties and challenges, which can be the general factors for their refusal. The study also found that the refusal of suppliers to participate in public bidding was specifically on the matters of the budget of the contract, time frame of the delivery, and overall processing time. Based on the process of competitive bidding, the approved budget for the contract and the time frame for the delivery are being discussed and confirmed in the stage of the pre-procurement conference. Therefore, it is suggested that prior to pre-procurement, procuring entities should undertake extensive market research regarding the prevailing price of the goods and services to be procured and should maintain a price database. For the time frame for the delivery period, the procuring entity must strengthen the procurement planning in order to determine when goods and services should really be delivered in order to avoid passing the burden on suppliers to deliver the goods and services in a shorter period of time. Procurement through the competitive bidding method is still a longer process compared to other modes of procurement, hence the governing body for all procurement methods should continue its ongoing revision of the process, specifically in the time frame for the conduct in competitive bidding.

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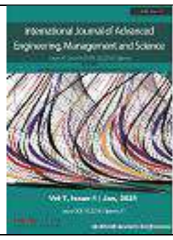

Experiences of Novo Ecijanos who were Scammed by Investment Companies

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Abstract— *This study described the experiences of the respondents who were scammed by investment companies in Nueva Ecija, Philippines. The research design was descriptive and the respondents were 50 persons chosen through the purposive sampling technique. The researchers found out that most of the respondents' age ranges from 20 to 24 years old. 70% of them were single, 74% were female, and their source of income was work/employment. They have learned about the investment company through social media and they were not aware that the company is fraud. The majority of them were recruited and the most enticing offer of the investment company is to double their income/profit or double their money in a month. They were bothered by the money they lose but most of them are having second thoughts of trying their luck again in an investment company.*

***Keywords*— Investment, employment, fraud, offer, scam.**

I. INTRODUCTION

Online investment has become more and more appealing to everyone's interest as access to technology becomes easier and accessible. Among those investments include digital marketing, forex trading or forex exchange market, cryptocurrency, and play-to-earn applications. These are now dominating the online market and mainstream social media platforms.

While a lot of investment companies have established their business well, not all investment entities can prove the legitimacy of their business. The Securities and Exchange Commission has recorded at least 28 entities soliciting investment from the public this year. But despite warning the public to be cautious in dealing with these schemes, investment fraud has also been predominant. The Philippines has been bombarded with fraudulent acts of investment this 2021 alone.

Last January 2021, Inquirer.net has published an article [1] regarding an exposé on online investment scams that tricks Filipinos by using the names of public officials and celebrities. Despite the adverse impact of the pandemic, there are still people who are taking advantage of the current situation by putting up schemes and fraudulent acts for their benefit. This includes posting fake ads on social media and asking new investors for their money. One of them is an unregistered investment platform, the Bitcoin Revolution, which uses fake government official endorsements and promises returns up to $1,000 in one day for a minimum investment of $250.

A study titled "Victim Characteristics of Investment Fraud" [2] conducted by three researchers in the US – S. Lee, B. Cummings & J. Martin – focused on the demographic profile of victims of fraud. They concluded that individuals in their 50s and 60s are more susceptible to becoming fraud victims, usually those who were on the verge of retirement. Meanwhile, single individuals turned out to be more aggressive in reporting fraudulent acts compared to those who were in their 50's and 60's.

J. Badua (2020), author of the study entitled "The Nature and Victimization of Investment Frauds" [3], specifically studied the reasons for falling into investment fraud, its effects, and the victim's coping mechanisms to reduce investment fraud victimization. The researcher conducted an In-Depth-Interview and used an interview guide to the 12 participants from Ilocos Norte who also turned out to be investment fraud victims. According to the author's study, the reasons for falling into investment frauds include the desire to increase income, scarcity in life, persuasion, trust and confidence, the profile of the victims, and recklessness. Additionally, the effects of investment fraud victimization include financial losses, feeling of betrayal, depression, frustration, vigilance, powerlessness, impairment of relationships, and loss of appetite. On the other hand, the author also found out the victim's coping mechanisms to reduce investment fraud victimization through openness, hopefulness, courageousness, and self-help. After studying the respondents from Ilocos Norte, J. Badua concluded that the victimization of an individual with investment fraud is attributed to personal motivations and character and various coping mechanisms were of great help for the victims to overcome their suffering.

Now this study focused on the experiences of the Novo Ecijanos who were scammed by fraud investment companies. The variables included were the demographic profile of the respondents as to age, civil status, sex, and source of income. Their experiences specifically involved the following: how did they learn about the company? were they recruited? were they aware that the company was the fraud? what were the offers of the company? were they bothered by the money they lose? and will they try to invest in a company again?

II. RESEARCH METHODOLOGY

The researchers utilized a descriptive research design. [5] Descriptive research is a type of research that describes a population, situation, or phenomenon that is being studied. It focuses on answering the how, what, when, and where questions. The data gathering instrument used was an online survey through the use of Google Forms. All of the researchers' respondents were victims of online investment fraud. Using a questionnaire interview, the demographic profile of the victims, their source of income, and how they became involved in investment fraud were described. The researchers gathered 50 respondents for the research. They were all victimized by scammers and all of these respondents are Novo Ecijanos who invested from small to large capital in online investments through social media, friends, acquaintances, and other platforms. They are all scams, with the convincing statements becoming more "profitable". To evaluate and validate the interview questionnaire survey, the data were analyzed using frequency, percentages, averages, and weighted mean.

III. RESULTS AND DISCUSSION

1. What is the Profile of the Respondents in terms of age, civil status, sex, and source of income?

The profile of scam victims of investment fraud was described in terms of age, civil status, sex, and source of income.

Table 1 shows that most of the respondents' ages range from 20 to 24 years old. 70% of them were single, 74% were female, and their source of income was work/employment. The average of their ages indicates that even at a young age, they are involved in investment schemes. This implies that the investment in the business by young people is also being admitted. Even though the allowance for pocket money is their investment, younger and single people are more likely to make such an investment to earn even more in the future.This goes to show that younger individuals are at most risk when it comes to fraudulent activities. With their small to large investment through their work/employment (46%) monthly salary income, the investor may have to risk the opportunity to earn and to lose, considering that their investment is only guaranteed with flowery words and promises from the recruiter or scammer.

Table 1. Profile of the Respondents

PROFILE	Frequency	Percentage
AGE		
20-24	17	34%
25-29	14	28%
30-34	13	26%
35-40	6	12%
CIVIL STATUS		
Single	35	70%
Married	14	28%
Separated	1	2%
Widow	0	0%
SEX		
Female	37	74%

Male	13	26%
SOURCE OF INCOME		
Allowances	12	24%
Business	15	30%
Work/Employment	23	46%

The findings describe the age, gender, or financial capacity of the respondent victims who enter and gamble on an investment, including people who want to make a profit. It has been shown that young, single female employees are easily deceived into investing online. The negative or positive outlook, especially for investors who want to enter a business market, also means that an investment is likely to lead to failure or success, or maybe a gamble with uncertainty. What they learn as they embark on any investment will assist them in learning to recognize and evaluate the people with whom they will interact in their chosen investment or business. It could be any of the following: they are tempted to make big profits or easy money; they are convinced by an acquaintance, relative, friend, or another person who they believe is trustworthy or who has a flowery way of speaking; or they are out of poverty or struggling in life, so they gamble the things they have. An investment is a choice whether you can be secured or assured; if you continue, you can earn or lose, because the investment is also a gamble.

2. How did you learn about the investment company?

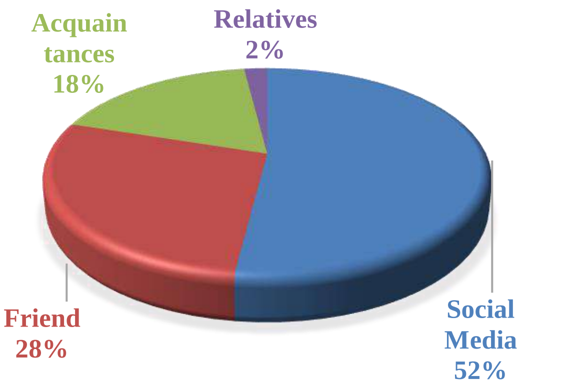

Fig.1. How did you learn about the investment company?

Figure 1 shows that 52% of respondents learned about the investment company through social media, followed by information from their friends with 28%, 18% from acquaintances, and 2% from their relatives.

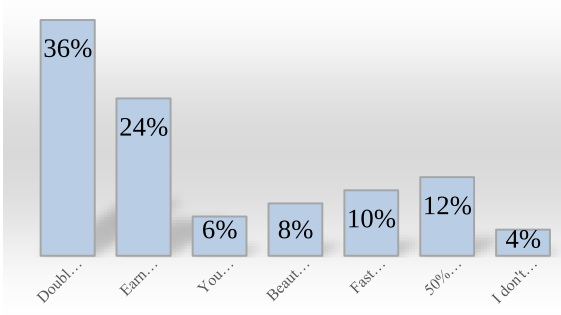

Fig. 2. What offer(s) did you get?

3. What offer did you get from the investment company?

Figure 2 shows that scammers offer or promise a good deal to entice the respondents to invest in their company. Scammers offer to double their income/profit or double their money in a month, according to an average of 36%; 24% offered a play-to-earn basis whereby if they play they can earn points that convert to cash; 6% said that scammers promised 10% of daily revenue, and 10% were promised a fast source of income and 12% offered of 50% return of investment within a month; 8% of respondents also said some scammers offer a beauty product in exchange for their investment, and 4% didn't have an offer because they were enticed by the investment platforms posted by the unknown person in the public group in social media. The offer from the scammer is not easy to reject, especially if it is a small amount of investment, and they can earn big.

3. Are you aware that the investment company is a scam?

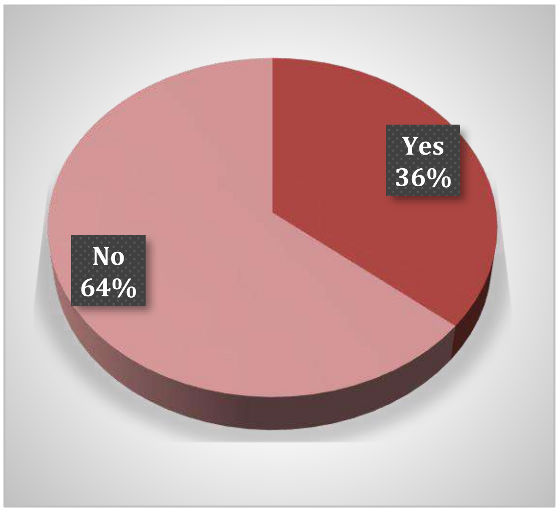

Fig. 3. Are you recruited by the Company? Are you aware that the investment company is a scam?

Figure 3 shows that 80% of respondents were recruited and 20% voluntarily entered into the investment. They were not aware the company is a scam.

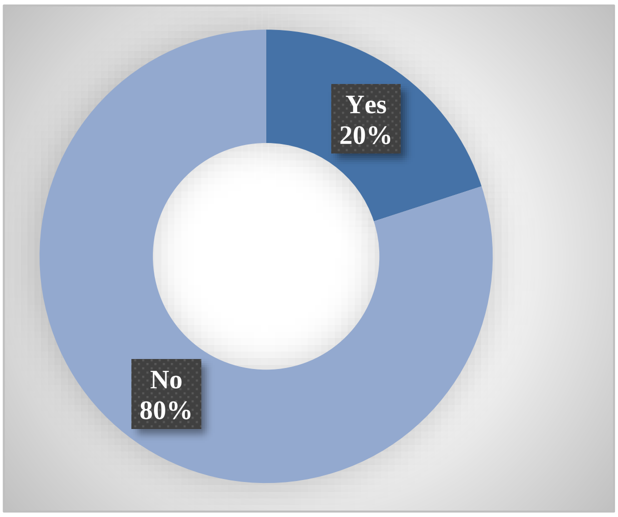

Fig. 4. Have You Recruited Someone Else?

Figure 4 shows that out of 50 respondents who were scammed online, 36% recruited someone else, while 64% say that they did not recruit anyone else. Recruiting is the other reason how does the investment scheme rapidly spreads.

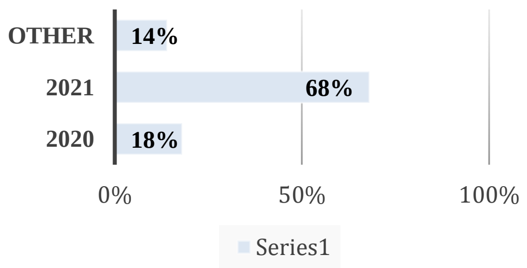

Fig. 5. Average Number of Victims in Investment Fraud Scam

Figure 5 shows that the average number of victims in 2021 in investment fraud scams is larger, with an average of 68% compared to 18% last year (2020) and 14% in the previous year. The continuous increase and proliferation of online victims show that despite reports of investment fraud, people are attracted and still enter into online investing.

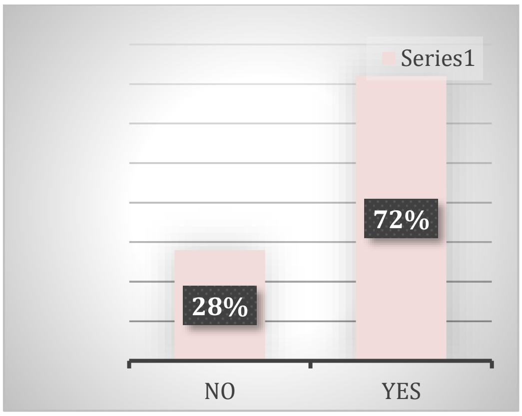

Fig. 6. Did the amount you lose bother you?

The survey interview question described in figure 6 was that 72% were highly bothered by fraudulent investment losses but 66% in Figure 7 answered that they may be investing again in the future. The responses show that many still want to gamble and invest even if they were already scammed.

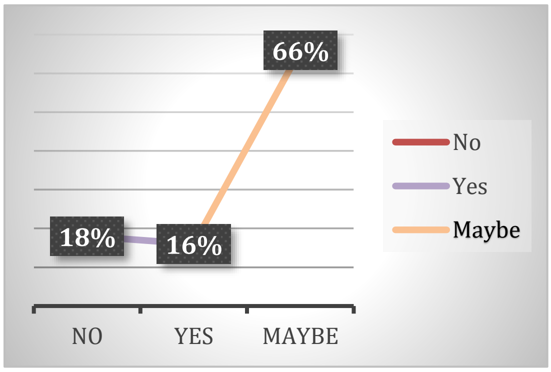

Fig. 7. Are you still going to invest in an investment company in the future even if you are not sure if it is Legal?

This is a very alarming situation since even if they were victimized by investment fraud, most of them are having second thoughts of trying it again.

Investment fraud is a form of financial scheme, and it can happen when a person lacks knowledge when it comes to investing or maybe overconfident and deceived by sweet words, misinformation, and investment income goals. The influence of social media, acquaintances, friends, or relatives can encourage to change the mindset and feelings upon entering into an investment.

Using various methods of persuasion, using sweet promises and persuasion to deceive others, including social influence tactics using pyramid recruitment, commonly used by others to expand its deception, and its effectiveness in influencing psychological mentality, especially in young people, who even invest their allowances.

IV. CONCLUSIONS AND RECOMMENDATIONS

The findings implied that good and tempting offer and promises of the fraud companies to the respondents was undeniably enticing. They were offering a good return on a small investment and promising a money-back guarantee. Another strategy of scammers is to recruit or "pyramid" recruitment, where it speeds up and increases the number of people who will be their victims. After conducting this research, the researchers came up with the following conclusion and recommendations: Young and single females who are in their early twenties are more enticed in entering into investment. They are easily swayed to invest by irresistible offers made by their friends and what they see on social media platforms. Most of the investment companies offer a double income and investment becomes highly profitable in a short period. The scammers are spreading rapidly through pyramid recruitment that increases the volume of victims.

To prevent fraudulent acts in the future, and to avoid shrinkage of income [6], people need to investigate before investing, think before grabbing. There is no easy profit in business; it needs the hardship to gain more profit. If the offer is too good to be true, one must think twice and verify the credibility of a company. Likewise, if someone is interested in investing, take time to talk to a third party who's knowledgeable when it comes to investments to avoid getting victimized by fraudulent companies.

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Method to Estimate Needed Personnel for Production of Akkawi and Kashkaval Cheese: A Case Study

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Abstract— *Calculating staffing needs is part of human resource planning, the process of analyzing and identifying staffing gaps and surpluses. Various formulas are used to estimate and predict staffing needs, based on the company's historical and estimated performance data such as sales and production numbers. Human resource planning focuses on staffing the organization with the right number of personnel with the required skills when needed to meet business objectives in the short and long term.*

However, very few depend on the actual process and the target needs. For this purpose, this method was developed as a management tool of two production lines with four rules of thumb. Each movement by a human worker is considered as one second per unit. When an action involves processing, transferring more than one unit, it is considered one second per process or transfer. When a machine is processing huge numbers of units, it is considered one second per machine stage. The technical efficiency of labor was set at 89%.

The above-mentioned method was applied on an Akkawi and a kashkaval production line and the results were validated and proper allocation of personnel increase the production of both by at least 1.2 times.

***Keywords*—Akkawi, Kashkaval, Units of production, Labor efficiency personnel**

I. INTRODUCTON

The importance of good work systems and organized management is recognized by many companies leading to better management, decision-making and quality improvement. At the same time, productivity is becoming more and more difficult to achieve and manage. The demands of the engineers and analysts are continuously rising in view of the rapidly changing market places and competition worldwide. This has made it imperative for organizations to upgrade and keep pace with progress [1].

The work measurement tools, such as M.O.S.T, Generalized Quantum Measurement, etc. existing are too complex and often need lots of expertize to administer [2] [1] [3]. Furthermore, work study is done to reduce the number of motions in performing a task in order to increase productivity. However, none, at least it was not found while doing our search, is done in the reverse i.e to base oneself on the existing operation and calculate the need of personnel per line of production. This is suitable to small to medium size operations have already established their routines and procedures. In certain instances especially in the cheese industry these routines are thought to give an identity to the product. Thus, it is not preferable to change the procedures but to render them more efficient. For this purpose the simple method to calculate needed personnel (S.M.C.N.P) was developed. The concept of the measurement system has been adopted from the M.O.S.T concept but with some modifications. It was applied on an ongoing production of Akkawi and Kashkaval cheeses.

1.1 Akkawi Cheese

Akkawi cheese is one of the white brined cheeses produced in the Middle Eastern region which are classified as rennet-coagulated cheeses with or without cheese) starter culture [4]. For Akawi cheese making, pasteurized milk is used (at 60°C for 30 min or 72°C for 15 s), cooled to about 35°C and then starter culture is added (1.5%). After 60 min, rennet is added to coagulate milk within an hour. The curd is cut, whey drained, and curd pieces are wrapped in cheesecloth in small portions (150 to 250 g), pressed for about 1 h, and brined in approximately 10% brine solution at 4°C. Typical Akawi cheese contains about 51.0% moisture, 21.6% fat, 22.5% protein, and 5% ash [5].

1.2 Kashkaval cheese

Kashkaval belong to the Pasta Filata cheeses like Provolone, Mozzarela, Ragusano and have a long tradition in the most east Mediterranean and neighboring countries [6]. This type of cheese is different from other cheese types because of the curd "stretching" process contributing to conferring typical characteristics of structure and aroma [7]

Rennet is added to raw milk at 32ºC to complete coagulation in 45 minutes. The coagulum is cut into cubes of one cm^3, left without stirring for 5-7 minutes. Then gradually stirred very gently at the beginning, while keeping the temperature at 32ºC. After the curd has settled, 50% of the whey is drawn off, and stirring is continued with gradual raising of temperature up to 35-40ºC. The curd is placed into the vats ready to be pressed. Curd is pressed by a suitable weight (about 1 kg/1 kg of curd) to hasten the expulsion of the whey. This stage is completed when the titratable acidity of the curd reaches 1.25-1.35% and the pH value becomes 5.2 [8].

The mass of ripened cheddared curd is then cut into large blocks usually (60×10×10cm) which are cut afterwards into thin slices usually (10×7×1.5 cm) and scalded with 8-9% brine at a temperature of 75±2ºC, and worked for about 3-5 min to become a homogenous plastic paste [8].

The scalded or cooked curd is kneaded vigorously to get rid of the remaining hot whey and then moulded. The bundle is squeezed by hand and the excess curd. The cheese is left in the mould until the following day.

The young cheese is removed into a cellar having a temperature of 18ºC and relative humidity of 70-75%. Forty gram of dry coarse salt is sprinkled daily on the cheese surface for 4 days, followed by 30 gm for 6-days. After salting, the cheese is cleaned using smooth brushes and warm water, then rubbed with 2% alcoholic sorbic acid solution or 1% aqueous potassium sorbate. Cheese is kept in piles in the cellar while being turned every two days. When the cheese becomes 35-45 days old, it is coated either with wax or plastic-coat. Then the cheese is ripened at 13±2ºC and 83±2% humidity for 6 months or more.

1.3 Rules of thumb for S.M.C.N.P

To apply the SMCNP we have to abide by four rules of thump:

- **First:** Each movement by a human worker is considered as one second per unit.
- **Second:** When an action involves processing, transferring more than one unit, it is considered one second per process or transfer.
- **Third:** When a machine is processing huge numbers of units, it is considered one second per machine stage.
- **Fourth:** Technical Efficiency of labor should be considered.

II. MATERIALS AND METHODS

2.1 Procedure to determine activities to be recorded

In our case study, we start by observing the work flow to construct a general flow chart. Then an extensive flow chart is established. This extensive flow chart would be constructed at least 3 times and done while processing different milk batches. Once the extended chart is established, it is fine-tuned to see if an activity is missing. Once all the activities are recorded, each activity is assigned one second (Fig. 1).

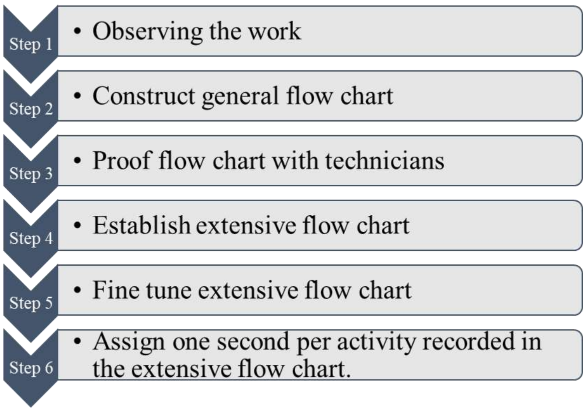

Fig. 1. Procedure to determine activities to be recorded

2.2 Calculations for needed number of personnel

The sum of seconds per unit of production is done. Then the level of production is set. The first value is the actual production level (number of units). Multiplying the seconds attained by summation, we will have the total calculated time needed to achieve this production target.

After achieving the total number of seconds, we divide the total time needed to achieve the target production level by the total shift time (7.5 hrs-0.5hrs for lunch). This would give us the number of production personnel needed to achieve that.

However, this implies 100% efficiency of the personnel throughout the 7.5 hrs. Which is not feasible, thus a level of 89% efficiency is assumed the average recorded technical efficiency by Banker et al. [9] based on the equations set by Charnes et al. [10] [11]. The total number of calculated personnel needed is then divided by 0.89 to get the final calculated needed personnel and in the presence of decimal the answer is always rounded up (Eq. 1).

Equation 1

$$\text{Personnel needed} = \frac{\text{Production units} * \text{Activity Seconds}}{\text{Shift time (Sec)} * \text{efficiency (0.89)}}$$

2.3 Comparing results with actual situation

Once the calculated needed personnel is estimated it is compared to the actual personnel number. Then it is validated by practice noting that this is conducted in real life factories.

III. RESULTS

3.1 Akkawi Cheese

3.1.1 Akkawi cheese production

Before the study, the factory was processing 11 tons of milk for akkawi production. The average of kg milk to kg akkawi cheese conversion value was 7.61 ± 0.01. the unit of production is a block of cheese of 0.56 ± 0.05 kg. The units of production of 11, 13, 17 and 20 tons of milk were recorded and how many tanks are produced (Table 1).

Table 1 Akkawi cheese production

Milk allocated	Units* of Akkawi	17Kg Akkawi Tank	18Kg Akkawi Tank
(Ton)	Mean ± SD	Mean ± SD	Mean ± SD
11	2585±277	80±7	85±9
13	3055±326	101±11	95±10
17	4288±450	140±15	132±14
20	2667±280	157±17	148±16

- *: Unit is Akkawi cheese block of about 0.56±0.06 kg

3.1.2 Akkawi recorded activities

Following the rules of thump to determine and record the activities, there was 52-recorded activity per unit of production (Table 2).

By assigning one second per activity per unit of production we end up having 52 seconds needed to produce one unit of akkawi cheese. Starting from the *receiving milk for akkawi* down to the action of *lift knife up* are actions that involve processing, transferring more than one unit thus according to the second and third rules of thumb and are considered one second each. From *turn to take piece* activity down to *put on new plastic square* follow the first rule of thumb and is considered one second each. The rest follow the second and third rule of thumb (Table 2).

Table 2 Recorded activities in Akkawi Production

Activity	sec
Receiving of milk for Akkawi production	1
Preparation with culture	1
Preparing vat	1
Preparing table	1
Tightening Screws	1
Turning delivery tube to table	1
Delivering Curd	1
Putting big cloth on cheese	1
Putting total curd on table under press	1
Pressing the cheese	1
Releasing pressure	1
Taking cloth out	1
Press Knife down	1
Cutting curd	1
Lift Knife up	1
Turn to take piece	1
Lifting square	1
Turn to deliver cheese	1
Take cheese out	1
Turn to return square	1
Fix it in place	1
Get Cloth	1
Prepare cloth	1
Get Piece of cheese	1
Put it on cloth	1
Wrap side 1	1
Wrap side 2	1
Wrap side 3	1
Wrap side 4	1
Press While wrapping	1
Put on Plastic square	1
When full turn to get new plastic square	1
Put on top new plastic Square	1
Take to press stage 1	1

Press in press 1	1
Take to press stage 2	1
Press in press 2	1
Take away from press 2	1
Take to salt room	1
Get stainless steel racks	1
Mount stainless steel racks	1
Put cheese on stainless steel racks	1
Mount cloth on stainless steel racks	1
Mount side fixers	1
Mount rubber	1
Get internal lift	1
Lift rack plus cheese to salt bath	1
Take cheese from salt bath	1
Go to tank sealer	1
Put cheese in tank	1
Put salt water in tank	1
Seal tank	1
Total	52

3.1.3 Personnel calculations and production potential

To calculate the personnel needed to be able to process the received milk for akkawi production we multiplied the units of production (Table 1) with the total time needed then divided by the total shift time and the estimated technical efficiency (Eq. 1) and rounded up.

The production level at 11 ton milk for akkawi production per day was the standard till the start of this study. According to the calculations we had 2 personnel extra (Table 3) corresponding to 18 working hours available (table 4) which can be either allocated to other needed division or used to increase the level of production.

When the level of production was increased to 13 tons per day there was no problem. This actually validated our calculations which showed an extra of 1 personnel extra. When 17 tons per day was tried, with 8 personnel we needed from half an hour to 45 minutes extra time whivh corresponds to the extra working hours needed (Table 4). Our calculations was further validated by the 20 ton per day level where 3 temporary extra personnel were allocated from other divisions, which corresponds to the values calculated (Table 3) (Table 4).

Table 3 Akkawi cheese production personnel

Milk allocated	Calculated Personnel	Real Personnel	Balance*
(Ton)	Person	Person	Person
11	6	8	2
13	7	8	1
17	9	8	-1
20	11	8	-3

*: Real personnel – Calculated personnel

Table 4 Akkawi cheese production hours

Milk allocated	Work hours calculated	Work hours Available	Balance*
(Ton)	hr	hr	hr
11	42	60	18
13	52.5	60	7.5
17	67.5	60	-7.5
20	82.5	60	-20.5

*: Work hours available – work hours calculated

3.2 Kashkaval cheese

3.2.1 Kashkaval cheese production

Before the study, the factory was processing 30 tons of milk for kashkaval production. The average of kg milk to kg kashkaval cheese conversion value was 9.75 ± 0.18. the unit of production is a blocks of cheese of 250, 350, 700, 3000 and 8000 gr. The units of production of 30 and 36 tons of milk were recorded many pieces are produced (Table 5).

Different from akkawi, kashkaval cheese production plan is more complex since different cheese block sizes are requested by the market. The advised trend in production by the marketing department was to reduce the 8Kg cheese blocks production. According to them the smaller the piece the better. That is why the possibility of having a second production plan for processing 36 tons of milk was considered. The most demanded ones, according to the marketing department, are 350, 700, 3000 and 8000 gr. Thus, we might have the same milk level but different pieces due to different production plans (Table 5).

Table 5 Kashkaval cheese production

Mold sizes	30 tons milk Pieces	36 tons milk Pieces	36 tons milk* Pieces
350 gr	1,344	1,344	3300
700 gr	940	1,177	1681
3000 gr	795	1,041	347
8000 gr	0	209	35
Total	3079	3770	5363

*: Production plan for lower 8Kg cheese blocks

3.2.2 Kashkaval recorded activities

Following the rules of thump to determine and record the activities, there was 44-recorded activity per unit of production (Table 6).

By assigning one second per activity per unit of production we end up having 44 seconds needed to produce one unit of kashkaval cheese. Starting from the *receiving milk for kashkaval production* down to the action before *Taking from calibrating machine* are actions that involve processing, transferring more than one unit thus according to the second and third rules of thumb and are considered one second each. From *Taking from calibrating machine* activity down to *Discard cheese mold in proper place* follow the first rule of thumb and is considered one second each. The rest follow the second and third rule of thumb (Table 6).

3.2.3 Personnel calculations and production potential

To calculate the personnel needed to be able to process the received milk for kashkaval production we multiplied the units of production (Table 5) with the total time needed then divided by the total shift time and the estimated technical efficiency (Eq. 1) and rounded up to the nearest integer.

Table 6 Recorded activities in Kashaval Production

Activity	sec
Receiving of milk for Kashkaval production	1
Preparation with culture	1
Preparing vat	1
Preparing cheese basin	1
Preparing Steel molds	1
Turning delivery tube to table	1
Delivering Curd	1
Putting big cloth on cheese	1
Taking sample	1
Measuring SH	1
Lift cheese plus steel molds	1
Cutting curd	1
Freeing curd	1
Lifting curd	1
Put on table	1
Turn to take another piece	1
Close curd holding table	1
Descending Steel molds	1
Turn to deliver cheese	1
Preparing steam machine	1
Adding salt	1
Prepaid calibrating machine	1
Cleaning machines	1
Take fat Bucket away	1
Pumping whey away	1
Lifting curd to mincer	1
Turn to deliver	1
Turn to take another	1
Taking from calibrating machine	1
Preparing molds	1
Turn to get mold	1
Put cheese in mold	1
Turn mold holding table	1
Prepare table	1
Turn mold 1st time	1
Turn mold 2nd time	1
Turn mold 3rd time	1
Turn mold 4th time	1
Pick mold	1
Release cheese out of molds	1
Put them in Rakes	1
Discard cheese mold in proper place	1
Turn to hold rake	1
Take rakes for storage	1
Total	44

The production level at 30 ton milk for kashkaval production per day was the standard till the start of this study. According to the calculations we had 3 personnel extra (Table 7) corresponding to 25.5 working hours available (table 8) which can be either allocated to other needed division or used to increase the level of production.

When the level of production was increased to 36 tons per day there was no problem. This actually validated our calculations which showed an extra of 2 personnel extra. When 36 tons per day was tried, with 5363 production units instead of 3770 (Table 5), with 9 personnel we needed around half an hour extra time which corresponds to the extra working hours needed (Table 8).

Table 7 Kashkaval cheese production personnel

Milk allocated	Calculated personnel	Available personnel	Balance[a]
(Ton)	person	person	person
30	6	9	3
36	7	9	2
36*	10	9	-1

*: with different production plan

a: Available personnel – Calculated personnel

Table 8 Kashkaval cheese production hours

Milk allocated	Calculated work hours	Available work hours	Balance[a]
(Ton)	hr	hr	hr
30	42	67.5	25.5
36	51	67.5	16.5
36*	73	67.5	-5.5

*: with different production plan

a: Available work hours – Calculated work hours

IV. DISCUSSION

In the cheese industry the quality of the final product was still dependent on no matter how highly mechanized the cheese-making plant is [12]. The food industry is still labor intensive. It is necessary to control labor costs and forecast labor demands accurately if the business is to succeed. If you have more staff than is required, your labor costs will be too high and the company will lose money. If you have insufficient staff for a particular time period, attaining goals will be more difficult. Thus, the goal in planning staffing and scheduling needs is to match labor supply with production volume so that one can achieve goals without excessive labor cost.

In the akkawi production this method has enabled the management to realize higher production with the same personnel. At 11 ton milk the production was less than the potential and thus some work hours were not exploited. This was validated by real trials, which were conducted in real situation. This has lead to the increase of production by 20% with the same labor.

As for the Kashkaval production which is more complex in output since we have weight dependent units of production. An increase in cheese output using the same number of personnel is achieved. Thus has increased the capacity of milk processing from 30tons to 36 tons. It is also dependent on the number of units in the end product. Where we might have the same milk received but the number of units of production is much higher. Thus the labor need is also dependent on the production plan.

Table 2 and table 6 provide templates for akkawi and kashkaval production activities that should be adjusted to fit the individual factory. The recorded activities should be Adjusted for each factory and validated. Once established it will provided a management tool to assess the optimal point between labor and production plan. Furthermore, if any structural/ operational change, such as change of factory layout or change of operating machine, a recalibration of the method is due.

Last but not least, once the method is validated, it can give the management not only an idea of the current number of personnel needed, but also about the overtime hours needed and the labor needed for the different production plans.

V. CONCLUSION

There is a possibility of assessing the efficiency of the factory labor using this method. Furthermore, it gives a guideline for the akkawi and kashkaval production. It shows how each production with different units of production varies.

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Philippine Farmers Adaptation of Hybrid Rice Technology to Increase Profitability and Contribute to Rice Sufficiency

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Abstract— *This study explored the adaptation of Filipino farmers to using hybrid rice and its farming technology. A sample of 100 respondents was selected through convenience sampling. Data were collected mainly through a questionnaire (digitalized online survey) distributed to the targeted groups. The findings revealed that most of the farmers chose to plant both inbred and hybrid rice seeds during the wet and dry seasons even knowing that hybrid rice varieties have a higher yield potential than inbred seeds. The study also revealed that after planting hybrid rice seeds, farmers' yield increased significantly that has positively affected their income. The major challenge the farmers is facing is the high cost of hybrid rice seeds and farm inputs. It is recommended that farmers should try using hybrid rice seeds in farming and further request the government to provide them more subsidies for it. They should also attend trainings about hybrid rice production to equipthem about the latest technology in farming.*

Keywords*— *hybrid rice, farmer'sincome, profit, technology.

I. INTRODUCTION

Rice is one of the primary foods in the Philippines, its production is also an important source of employment and livelihood for Filipino farmers. In order to have a good return in rice seed production, farmers secure first to have a good quality seed. Rice seeds can be inbred or hybrid rice seeds. Inbred rice seeds allow the plant to reproduce itself through self-pollination or inbreeding; it means that the last harvested crop could be used to plant again providingthe same yield and characteristics. Its plant height averages from 90 to 100 cm only and its yield potential ranges from 5 to 9 metric tons per hectare for the wet and dry season. Hybrid rice seed is the first-generation product of crossing two rice plants. It has two genetically different parents in which their excellent traits can complement each other (IRRI, 2007). Hybrid Rice Seed can provide a 15-20% yield advantage over inbred rice seeds (Wang, Zheng, & Tang, 2018) that is why the Philippine agricultural sector eyes that it could be one factor to achieve rice sufficiency in the country. Major physical characteristics of hybrid rice seeds such as tillers, panicles, plant height, etc., are higher compared to inbred variety. China is the first country which starts research on the great potential of hybrid rice seeds. The embracement of China to this study led them to answer food security, feeding one-fifth of humanity and avoiding mass hunger (A. Barclay, 2007). The hybridriceseed production technology is one of the most successful applications that increased rice yield potential by 15–20% and guaranteed greatly Chinese food security (X. Wang et al., 2018). According to the Food and Agriculture Organization

(FAO), hybrid rice technology is the key approach for the increase of global rice production (C. Chase, 2015). In 2018, the total land area used for palay cultivation in the Philippines was around 4.8 million hectares. The production area of hybrid rice in the Philippines is still low at around 200,000 hectares, as compared to some of its neighboring countries, such as Vietnam and Indonesia. Although the country is one of the major consumers of rice globally, it is still a net importer of the commodity. Thus, the country is aiming to boost its domestic production of rice by introducing hybrid seeds. Despite the high yield that hybrid rice seeds can offer, still, not all farmers are choosing to plant hybrid seeds. In fact, last 2019 in a briefing with IRRI, they said that only 10% of agricultural lands are planted with hybrid varieties while 90% are planted with inbred rice seed in the country (Business World, 2019). In the study of Mordor Intelligence, the production area of hybrid rice in the Philippines is still low at around 200,000 hectares, as compared to some of its neighboring countries, such as Vietnam and Indonesia. The promotion of hybrid rice has been the centerpiece of the Arroyo's administration rice production program since 2001. Government efforts to encourage hybrid seed production and adoption by farmers actually began in 1998 (C. David, 2007). These early efforts focused on intensified research, short term and season-long training programs on hybrid seed production, andlarge-scale technology demonstrations in 11 top rice-growing provinces. The Department of Agriculture (DA) wants to further improve the country's rice productivity and adequacy levels this year, boosted by the combined outcomes of government interventions and continued strong partnerships with farmers' groups, riceindustry stakeholders, and local government units (LGUs). "We target to produce 20.4 million metric tons (MMT) of palay, surpassing last year's record harvest of 19.4 MMT, and factoring in challenges of the lingering pandemic and adverse weather conditions," said Agriculture Secretary William Dar. Today, the government continues to provide hybrid rice seed subsidies or the hybridization program in chosen provinces with the help of the Rice Board and private sectors and construct trainings and activities that aim to promote the latest technologies in rice production. On the other hand, they also give inbred rice seed subsidies to different provinces. The aim of this study is to know if the farmers are adopting the use of hybrid rice seed in farming and how it affects their profitability and its contribution to achieving rice sufficiency in the country. Also, to know the reason why some farmers are still not using hybrid rice seed in farming. Lastly, to provide the government with some ideas/information regarding the ratio and kind of rice seed subsidy to offer.

II. METHODOLOGY

The researchers utilized a descriptive research design for this study. According to Aggarwal (2008) as cited by Salaria(2012) & (Garcia & Subia, 2019) "descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation".This research design was used because this endeavored to describe the results with the use of hybrid rice technology. Farmer-respondents were selected using convenience sampling. They were picked based on availability and willingness to take part in this study. The researchers provided a questionnaire (digitalized online survey) to distribute it to the targeted group to some 40 barangays in San Jose, Nueva Ecija, Philippines. The data werethen tallied, interpreted, analyzed and discussed using some statistical tools.

III. RESULTS AND DISCUSSION

Table 1. Respondents' history in planting rice seeds

HISTORY	FREQ.	%
Planting only hybrid rice seed	7	7
Planting from inbred rice to hybrid rice seeds	33	33
Both use inbred and hybrid rice seeds	60	60
TOTAL	**100**	**100**

The data shows that the respondents were already using the hybrid rice seed in farming, but still they also preferred inbred along with the former. There are pros and cons in the use of hybrid seeds. Filipino rice farmers have still to be educated as regard the benefits of planting hybrid seeds for many reasons. First and foremost consideration is its high yield. Currently, the Philippines is still relying on rice importation to augment the needs for a continuous supply of rice whole year round.

The respondents were asked about the reasons why they adapted hybrid rice and the result is shown in **Table. 2**

Table 2. Reasons why farmers adapted hybrid rice technology

HISTORY	FREQ.	%
Harvested higher yield than inbred rice seeds	80	80
Acquired free hybrid rice seeds from government subsidy	56	56
Hybrid seeds have better quality than inbred seeds	31	31
Palay rice is higher when sold in the market	25	25
Delicious, white, and good-eating quality rice	24	24

The respondents (80 of 100) answered that the main reason why they chose to plant hybrid rice seeds is because of the higher yield compared to inbred seeds. These farmers differentiate theharvested yield since most of them already experienced planting these two kinds of rice seeds in both dry and wet seasons. The respondents (56 of 100) also answered that they adopted hybrid rice because theygot it free from the government and that was the chance to experiment on it. The respondents also considered hybrid seed because of its good quality over inbred (31 of 100), they added that hybrid seeds have more grains and panicles resultingin a heavier weight. Lastly, they choose hybrids due to the high market price of it when sold in the market (25 of 100) and the good table-for-food quality (24 of 100) it possesses which is thereason why many consumers like it.

Table 3. Percent change in profit after using hybrid rice technology

HISTORY	FREQ.	%
$\leq 0\%$	8	8
25% increase in profit	46	46
50% increase in profit	30	30
100% increase in profit	16	16
TOTAL	**100**	**100**

The majority of the respondents answered that after using hybrid rice, their profit in farming increased and it affected their income (Vertudes, Musa, Cosilet, Salagubang, &Balaria, 2020). Forty-six (46) of respondents said that their profit increased by 25%, 30 respondents answered it increased by 50%, 16 respondents answered it increased by 100% and 8 respondents indicated that there were no increase in their profit. According to the farmer respondents, even if the price of palay was below average in the farmgate then because the hybrid rice variety has a higher yield. Variances in the harvest are partly caused by low turnout of harvest because the Philippines is often visited by typhoons.

Table 4. Percent change in harvested yield after using hybrid rice technology

HISTORY	FREQ.	%
$\leq 0\%$	7	7
25% increase in profit	43	43
50% increase in profit	28	28
100% increase in profit	22	22
TOTAL	**100**	**100**

Using hybrid rice seeds increased the rice production of the farmer-respondents. According to Wang, Zheng, & Tang (2018), hybrid rice seeds can provide a 15-20% yield advantage over inbred rice seeds. At the present time, this percentage is already achievable and is continuously increasing because of the new technique applied in farming. The rice resiliency project of the government that provides farm subsidy such as seeds and fertilizers greatly help the farmers boost rice production. During the year 2020, the project provided seeds for 2.15 million hectares to be planted to inbred rice and 550,000 hectares planted to hybrid. The government also have the goal of shifting 200,000 hectares previously planted by inbred into a hybrid to produce an incremental yield of 300,000 metric tons of palay.This project's goal is to hit 93% of the country's total demand for rice which is 14.46 million metric tons (MMT) of rice.

Table 5. Reasons for not using hybrid rice seed

HISTORY	FREQ.	%
Hybrid rice seed is more expensive than inbred	11	64
Hybrid have a tendency to lodge during the wet season	3	18
Lack of supply in hybrid seed	3	18
TOTAL	**17**	**100**

Out of 100 respondents, only 17 answered why they missed or intentionally did not want to use hybrid rice seeds. Sixty-four percent of them disclosed that hybrid seeds are more expensive when bought in commercial stores which is their main problem (Abelardo, et al, 2019). This implies that they have a low buying power in terms of inputs. Eighteen percent responded that the tendency to lodge or cause the plant to drop during the wet season are inevitable, hence they are afraid to take this risk. Lastly, another 18% answered that they did not have the ability to plant their desired hybrid variety because of lack of supply.

IV. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, the researcher concluded that farmers of San Jose City, Nueva Ecija adapted to planting hybrid rice seeds along with inbred rice seeds. Their adoption to using hybrid rice technology boosted their total yield production as well as their profit or income. If farmers all over the country use hybrid rice seed and experience an increase in yield, then it can largely contribute to achieving rice sufficiency in the country. Based on the findings and conclusions, the following recommendations are given: a. the farmers should consider using hybrid rice seeds even though it is expensive because their cost could be compensated after the harvest, b. farmers should attend trainings regarding rice farming to know more about new techniques especially as regard the hybrid seeds; c. the government should promote and provide more subsidies in hybrid rice than inbred rice seeds and provide farming assistance regarding the hybrid rice technology; d. private company providers of hybrid seeds should strengthen their marketing strategies and promotion.

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Self-directed teams a Mexican perspective

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Abstract— *Self-directed teams and culture development are widely used by scientists in various disciplines and is found particularly often in discussion of the integrations of aspects of Mexican Philosophy. However, no consistent information of this terms exists according to Mexican literature. Thus, the objective of this paper is to derive a definition of self-directed teams and culture development by means of a systematic literature review that includes different perspectives and research streams to define the influence of self-directed team in culture development. As result, in Mexican case, there are components in common as performances, leadership, team creation changes manager, capacity, and supply chain in in self-directed teams.*

Keywords— ***Self-directed team, systematic literature review, Leadership.***

I. INTRODUCTION

Team information has gone beyond simply looking at the relationships between individuals and providing feedback to people. Team configurations are a source of enrichment and depth in obtaining information. If they are made up of people with diverse backgrounds, the options produced will be broader and the analysis more critical. Self-directed work teams are essentially important because they lead to an increase in the participation of team members in the work, create greater commitment to the company, and motivate staff in their performance. Thus, self-directed work teams tend to have many points in common: group objectives, function differentiation, value systems, behavioral norms, levels of power, influence, and degrees of cohesion. Better interpersonal relationships are developed, personal goals are met, and other positive dividends are produced. All this for personal and organizational achievements simultaneously

Currently, work teams are considered essential to generate new ideas and better solutions, especially in the middle and upper management levels of companies. It is indicated that the use of self-directed teams leads to the solution of a problem that is more efficient, due to the great help provided by the members by offering a wide range of ideas and opinions, which makes it easier for the group or the company to decision making and problem solving more efficiently.

The homogenization of information at a global level is an important factor for the development of societies, in the case of Mexico, self-directed teams have taken an important role, however, the information available varies according to the area in which the staff works. Therefore, the goal is to derive a definition of self-directed team by means of a systematic literature review.

II. METHODOLOGY

Systematic literature review (SLR) was carried on follow the method described by Hernandez Sampieri (Hernández Sampieri et al. 2010), Parameters to SLR was describe below.

Due to we could not identify any comprehensive article focused on self-directed team in Mexican culture, research used question for the systematic review as: “what is the Influence of self-directed on culture development” or “what is the understanding of self-directed on culture development?". To search the literature, we chose the search term "Self-directed *", self-direct * culture", "Development and self-direct". The databases searches were google academic and sciencedirect. Using the search terms mentioned. To applying practical screening criteria, we include journals papers, books, research reports, conference proceeding, and practitioner-oriented contributions written in Spanish with a time restriction of 10 years. To applying methodological screening criteria, we subtract the most important concepts from each paper referred on interest words to discuss on results.

III. RESULTS

Theorical perspective of self-directed team and culture development

Research shows that self-managed teams produce higher levels of effectiveness and better solutions, as well as increased levels of productivity and creativity. Buckley, Steve & Rose Ed (1999) Mentions that one of the main characteristics of self-directed teams is the disappearance of the figure of the boss, so decision-making falls on the group, attending the needs with the skills of each of its members. The different characteristics of its members make an efficient team due to the individual and group performance of the workers that form it. Another feature is the management of tasks and projects jointly, these can attend to any team activity if necessary, providing the team with greater flexibility and reaction capacity. A reduction in operating costs is obtained, a greater response to the needs of the employees, an increase in the commitment of the workers with the organization, the ability to attract and retain talent in the organization, improve quality and customer service.

Organizations have formed self-directed teams for various purposes, evidenced by the large number of existing classifications, standing out among them:

- Transfusion work team, also known as a horizontal team, this team is made up of employees from different organizational functions who may have comprehensive responsibility for a business line, a procedure, a client.
- Project team, this is made up of the individuals who form a team for a specific project; the team disbands once the project is finished.
- Functional work team, this team is made up of employees from a particular area, where they combine their skills and expertise to serve a certain group of clients.
- Self-directed work team that is self-ministering, this team may or may not have a leader and are often responsible for choosing their own members, reviewing their performance and making decisions regarding corrective action or dismissal.
- Task force team, the mission of this team is to face a long-term strategic function, implement a new system or develop new policies for the organization.
- Continuous improvement team, which focuses on the continuous improvement of processes.
- High-performance team, made up of the best talents and focused on short- or long-term strategic objectives.
- Virtual World Team, this team brings together members from all over the world who rarely meet in person.
- Executive team, this team is made up of the executives who report to the general director of operations, in the absence of the general director of operations the team can collectively assume the function of managing internal operations and take part in the function of formulating strategies, as well how to manage external relationships

The most important thing about self-directed teams is that the members must be people with adequate profiles and capacities to achieve the objectives and goals set (Yukl G.,2013) To be effective, they must show team skills, which will help them think, act in a coordinated manner and each member perform interdependent tasks, but they are linked with that of other team members, and success is only achieved by bringing all these together. efforts and achieve the desired results.

Self-directed teams go through a process in their formation, which starts from the first individual decisions until the moment in which the subject feels a necessary part of a high-performance team, these teams can use their information-sharing capabilities to develop levels of trust and responsibility; In the same way, classifying the limits for free action, and activating responsible action in the same order of ideas as their self-management skills allows them to make team decisions and achieve great results.

Acosta says with the formation of self-directed teams, it is intended that it be a high-performance team that exceeds expectations, it must be made up of a small number of people with the skills, purposes, proposed goals and responsibilities necessary for the performance of the work. But above these characteristics there must be a high degree of commitment beyond courtesy and teamwork. Where each of the members seeks to truly help others in achieving their goals, having a mutual concern for the personal growth of each one. This allows for interchangeable skills and therefore greater flexibility and shared leadership within the group. A team that has these characteristics is not an easy task, it implies creating a support that allows teams to develop and maintain personal commitment, since there are no rules, best practices or secret formulas that ensure high performance results (Acosta, Jose Maria, 2011).

An important aspect that must be studied before forming work teams in an organization is to assess whether the work requires or benefits from a collective effort; the first indicator is the complexity of the work and the need to obtain different points of view, if a task is simple and does not require obtaining different points of view, it is better to leave it to individual work and forget about the self-directed team, the second indicator is to question ourselves if the work creates a common purpose or the benefits are greater than the sum of the individual objectives, and the final test is to ask if the members of the group are interdependent in the tasks, where the success of each one depends on the success of the others, which to achieve it requires a great coordination of the team members.

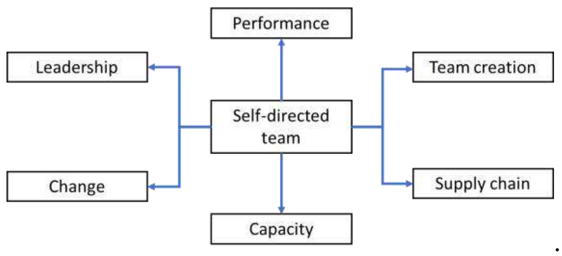

Fig 1 Self-directed team and relationship

Self-directed teams

A self-managed team is a group of employees who have the daily responsibility of managing themselves and the work they do with minimal direct supervision (Fisher, 2013).

Mantanilla, 2010, declares: Self-managed work teams are those that manage themselves, share most of the roles of a traditional supervisor, make decisions of a different nature, and manage one or several processes, groups of clients, products, or entire projects. Autonomous decision making one of the basic differences between these and other work teams.

High performance teams are groups of people with specific, complementary and multifunctional roles who cooperate together; they build a culture of commitment and loyalty in the organization" (Venable, 2019).

Fisher K states" Self-directed work teams are the most advanced form of empowerment. Being empowered means having formal authority, all the resources (such as budget, equipment, time, and training) necessary to do something with this authority, accurate information, and a sense of responsibility for the work they do (Fisher K., 2013).

In conclusion the dynamics and current challenges of companies require teams with the ability to empower any type of activity and problem that arises. This characteristic must permeate all levels of the organization and go beyond work in the office, each member understands their role, executes by taking the lead of the opportunity found, coordinating, and ensuring its successful completion.

Team leadership.

People have power when they believe they can adequately cope with the events, situations, and/or people they face. Then, power refers to an intrinsic need for self-control and determination (Conger & Kanungo, 1998).

For the success of a self-managed team there is a champion at or near the top of the organization who is fully committed to the self-managed teams and will protect, support and fight for the success of the effort (Orsburn, 1996).

Understanding the meaning of leadership, management and performance is vital for all levels within the organization, because all individuals in organizations need to assume these roles at various times to achieve efficient functioning of the organization (Balasubramanian , 2002).

The leader must be able to anticipate and have a future vision of the organization, so he must be proactive and prepare his company in a systematic, preventive and permanent way" in the same way Palomo describe "The leader must facilitate and stimulate the development of the potential and skills of the team of people he manages (Palomo, 2013).

When the skills are not developed first in the leaders and then in the work teams, there is a risk of leaving them paralyzed or involved in constant conflicts and reprocesses, stopping their development (Betancur, 2015).

There are six essential leadership styles. coaching was one of them and it was shown to have a remarkably positive impact on team performance, culture and results moreover Performance coaching is about addressing and solving a problem from the inside out of the team focused on the person who manages it. Finally, the essence of coaching lies in helping others and unleashing their potential (Bungay, 2016).

Organizing, guiding, and encouraging a work team is a fundamental task that every leader must learn (Maxwell, 2019).

Regardless of the type of leadership that is adopted, it must be faced with three types of activities: achieving the objectives, developing the collaborators, maintaining the group (Puchol, Luis, 2012).

The leader must think like another member of the team, he needs to be reincorporated into daily activities, involved in problem solving and improvement activities. Barahona, H., Cabrera D., Torres U., 2011, adding information, the leader is responsible for reinforcing and establishing the direction of the team, creating the conditions, structure, and processes where team members can participate to make the change that makes the area shine finally the daily tasks assigned by the leader provide the correct direction of the team and generate a responsibility for improvement. (Barahona et al, 2011)

Casanova declares: Self-managed teams merit a different behavior from superior managers, who must experience changes in behavior in the supervision and control of their templates because the process is not easy, therefore it must be applied gradually (Casanova, 2010).

As conclusion, the development of leadership skills in each of the self-constructed team members is key because at some point in the team dynamics they will act as such. You will have to set the tone of what direction should be taken to fulfill the established objective in any situation you find yourself in, this implies creating new ways of working and the development of the other team members.

Change management.

Nothing is as fast as the speed of trust, and this happens when teams trust each other (Covey et al, 2006).

Heath 2010, states: Identities are central to the way people make decisions, any change effort that violates someone's identity is likely doomed to failure. So, the question is, how can you make your change a matter of identity rather than a matter of consequences? Although Scientific study shows that people are receptive to developing new identities, that identities grow from small beginnings. Once you start to see yourself as one, you'll want to keep acting like one (Heath Chip, 2010).

Installing a self-managed team requires a substantial shift in power, all stakeholders must know their power bases and monitor how power is transferred to different levels of the organization (Hootengen, 2010).

Venable declares: A gap is a physical or emotional distance caused by a lack of competence, trust, or an unmet social need, no matter how impressive an outside team looks. The truth is that there may be gaps that prevent the team from maximizing its potential (Venable, 2019)

The best time to start a new stage is when there is still time and energy to make the new change start (Puchol, 2012).

The elements of a successful transition pattern can be visualized as a diamond with four facets: clarity in the role, desire for change, generation of change, support, self-knowledge (Fisher, 2013).

As conclusion, change is a constant and unpredictable activity. Self-directed teams must embrace and take this opportunity as a fortress for improvement and success. Resistance to change in a self-directed team should not exist. Each member of the team is considered a factor of change within the organization that generates a positive synergy, this is due to the culture of empowerment that each element has in the team.

Performance.

Sociotechnical systems theory promotes self-regulating work groups to create an effective relationship between social and technical components of work systems (Carlos, V. C. de L, 2020).

Corporate divisions are the most difficult area to team up with, but they are the ones with the greatest potential throughout the organization because that is where innovations are born (Buckley & Rose,1999).

Smaller groups complete assigned tasks more quickly than large ones, but if the team is busy solving problems, large groups consistently obtain better results (Ros Joan, A, 2006).

Organizational performance is something crucial that must be defined, that is why it is necessary to stipulate what the business indicators are and what the objectives of the organization are to be analyzed to determine its performance (Casanova, 2010).

Organizations have also discovered that group work is not detrimental to the performance of workers but, on the contrary, has beneficial effects for both the company and the individuals by the way The nature of the objectives determines the activity of the group, so for a team to function effectively it is necessary that objectives have been set (Acosta, 2011).

Self-managed teams are used for work systems where high individual and group performance is required. Self-directed groups are between 30 and 50% more productive than conventional teams (Covas, 2017).

The development of the teams and the difference in productivity results is related to the degree of progress of the teams. Therefore, it is important to develop a measurement instrument according to the data of the groups under study (Cedillo, 2014).

The performance evaluation determines the quality of the work performed by each collaborator (Hernández, 2016).

Martínez, J., Mejia D., 2013, mentions: Self-managed teams have allowed companies to report benefits such as improvements in the quality of their products or services, lower operating costs, fewer managers at intermediate levels, reduced costs by having a reduced staff, and resolution of problems with faster.

As conclusion the performance of self-directed teams must be constantly evaluated based on their results in solving problems and meeting success indicators. It is vital to assess the team as a whole and as individual contributors; traditional performance evaluation is focused on the contribution made by everyone. As members begin to be evaluated through group goals, the results will benefit internal and external customers of the organization.

Capacity development.

The real potential of a team is not only that they solve a problem, but also develop their capacities so that it is a group that maintains and reinforces itself in the same way Aligning is about improving a team's ability to think and act synergistically, with full coordination and a sense of unity, because team members know each other finally Senge (1994), states: Everyone has their own learning profile, preferred strategies for learning. Your learning style governs how you approach new projects, how you increase your own capabilities, how you contribute to a team's results, and whether you find it easy or difficult to sync up with a particular team. Getting a good learning mix can be critical to the long-term success of a team (Senge, 1994).

The challenge of self-directed teamwork requires resources and administrative support, training should focus on changing the organizational structure, organizational culture and employee behavior (Buckley & Rose, 1999).

Getting to know the people who make up each of the self-directed teams is very important, since it allows us to know the skills, values, beliefs, ways of working and interacting of each of the members (Moreno, 2010).

Moreno mentions: Team members need to develop certain skills, which they improve through training and practice, through teamwork, and through activities that involve thinking, developing new ideas, creating solutions to problems, analyzing situations, and implementing actions (Moreno, 2010).

Updating, increasing, and developing the different competencies related to each job position strengthens the weaknesses found in the Performance evaluations (Hernández, 2016).

If the company lacks sufficient capacity to adapt to the environment, it could not optimally develop its objectives (Puchol, 2012).

It is concluded that competencies of a self-directed team must be clearly identified and developed in each of the elements, focusing mainly on being factors of change for the organization. The higher the level of capacity developed, the team will facilitate access to knowledge in the organization, playing a role of consultant and advisor outside the team. By empowering the self-directed team with the right tools portfolio, you can become the operational excellence team that your organization is seeking.

Team creation.

Teams made up of heterogeneous members are generally more efficient than groups made up of similar individuals by bringing together more skills and information (Goodman and Argote, 1986).

The stages of development of a self-directed team are: start-up, state of confusion, leader-centered teams, well-formed teams and mature self-directed teams (Orsburn, 1996).

Corporate divisions are the most difficult area to team up with, but they are the ones with the greatest potential throughout the organization because that is where innovations are born in addition, before you can know how to support a team effort at any level, you need to be clear about your purpose, why do you need a team? What do you need to accomplish to be successful or add value. (Buckley & Rose, 1999).

In a self-directed team, work groups increase the responsibility of the members for the performance and results of the group, create labor interdependence and provide opportunities for self-management (Balasubramanian, 2002).

In a team, the members know their interdependence and understand that both personal and team goals are better met with mutual support (Ros Joan, 2006).

The main characteristic of a self-managed or self-directed team is that much of the responsibility and authority generally conferred on the supervisor is transferred to the team members (Yukl, 2010).

A self-managed team is not just another fad, there have been successful examples of such operations for decades. In a few years in particular, numerous organizations have used teams to improve results by 30 to 50 percent in addition, Self-directed teams go through five identifiable stages during the evolution process: research, preparation, implementation, transition, maturation (Fisher, 2013).

Self-managed teams are the answer every company wants; however, the organizations that have integrated them mention that it may take several years for the teams to stabilize and obtain their maximum potential (Martínez, 2013).

Knowing how to listen is one of the most valued qualities in any work team. Active listening is necessary for all team members (Puchol, Luis, 2012).

Virtual teams have 3 characteristics that distinguish them from other teams: their members are distributed in different locations, they are considered more diverse in terms of skills, team members are not constant (Fisher, Kimball, 2013).

As result in the implementation of self-directed teams, it is necessary to clearly establish what their purpose is, define what their success parameter will be, develop each of the capacities that they will need to face the opportunities, define the responsibility of the members in each of the training stages. and above all, develop the behaviors, values that must be preached when considered a team with high standards.

Supply chain.

Improving the supply chain is a necessity in order to survive, since failure to carry out this type of action can lead to the closure of a company (Saucedo, 2001).

Quintero mentions: An essential feature in companies is the logistics system, which is made up of the set of means of production, transport, maintenance and storage, used to circulate the products of the state from raw material stored in suppliers to finished elements held by the client (Quintero, 2018).

A cross-functional supply chain team can better balance the interest of all departments, moreover the supply chain frequently does not resolve conflicts in the correct way between the different functions of the departments, this is due to conflicts of interest between the areas of production, manufacturing, customer service, marketing and finance (Vázquez, C, 2021).

As result, the implementation of self-managed teams improves the speed with which products reach the destination and the recovery of the company's cash flow. This is because each link in the supply chain has a direct impact on customers, suppliers, and other departments. Each self-directed team works to identify opportunity areas in order to develop new processes and eliminate all identified gray areas.

IV. CONCLUSION

During the review of bibliographies, theses, journals and published documents, the characteristics of self-directed teams are identified: leadership, performance, capabilities, and methods for implementation; but there is no research evidence to identify what stage of maturation a self-managed team is in; diagnostic methodology, nor the tools to take you back to the highest level of operational excellence.

Everything indicates that a self-directed team has to start from the theoretical bases and go through each of the phases recommended by the researchers. Although in the updated one there are work teams with similar characteristics, but they are not qualified as such, because they do not know in what phase of self-directed teams they are. When carrying out the implementation process of this initiative, along the way it is determined that some conditions already exist, but after doing the whole process.

Being able to make an accurate diagnosis from the beginning allows us to understand at what stage the equipment is located, how far away it is from being able to ensure compliance with critical operations, monitoring of standards, and problem solving. Anticipating the needs of a self-directed team allows us to propose a strengthening line of work and reinforce what already exists, develop capacities, mitigate risks due to leaked knowledge requests, improve our clients' experience.

Research work on self-directed teams has been carried out in a controlled environment, where companies seek improvements in department performance through this proposal. However, there is no evidence of the effect that a self-directed team receives during a company defection process, this research does not define which are the critical variables for teams to continue functioning as such.

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