The Role of Knowledge Management (KM) Strategies in Enhancing Non-Governmental Organizations' (NGOs') Performance: A Case Study in Palestine*

Sivil Toplum Kuruluşlarının (STK) Performans Gelişiminde Bilgi Yönetimi (BY) Stratejilerinin Rolü: Filistin Vaka Çalışması

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Abstract

The purpose of this study is to investigate the role of Knowledge Management (KM) strategies in enhancing Non-Governmental Organizations' (NGOs') performance. Descriptive research method is followed in this study as well as a quantitative research technique based on an electronic questionnaire survey to collect data. The research population consists of a total of 1.200 local and international NGOs that are active throughout the Palestinian Territories. A total number of 291 questionnaires (sample) were distributed to managers of NGOs or their representatives, and a total of 228 responses were received. The validity and reliability of the collected data were evaluated which were used for statistical analysis. The researcher used Statistical Package for Social Science (SPSS) version 25.00 to test the hypotheses. Two main hypotheses tested were "There is a positive relationship between the codification strategy of KM and NGOs' performance" and "There is a positive relationship between the personalization strategy of KM and NGOs' performance". The research results demonstrate the KM strategies of codification and personalization are significantly affecting the NGOs' performance in Palestine in terms of three selected dependent variables namely financial sustainability, organization process/function, and program/project performances. However, the sub-hypothesis of the impact of the codification strategy on financial sustainability was dropped from the model due to a lack of significance. All other sub-hypotheses that express the positive effects of both KM strategies were proved. According to the research findings the study recommends that decision-makers in NGOs in Palestine should apply the KM strategies as a means of increasing organizational performance.

Öz

Bu çalışmanın amacı Sivil Toplum Kuruluşlarının (STKların) performansını artırmada Bilgi Yönetimi (BY) stratejilerinin rolünü araştırmaktır. Çalışmada betimleme yöntemi ve veri toplamak üzere elektronik ankete dayalı nicel araştırma tekniği kullanılmıştır. Araştırmanın popülasyonunu Filistin'deki toplam 1.200 aktif yerel ve uluslararası STK oluşturmaktadır. STK'ların yöneticilerine veya onların temsilcilerine toplam 291 (örneklem) anket dağıtılmış ve bunların toplam 228'i yanıtlanmıştır. Toplanan verilerin geçerliliği ve güvenilirliği değerlendirilmiş, bunlar istatistiksel analizler için kullanılmıştır. Araştırmacı hipotezleri test etmek üzere Statistical Package for Social Sciences'ın (SPSS) 25.00 versiyonunu kullanmıştır. Test edilen iki temel hipotez "BY'nin kodlama stratejisiyle STK'nın performansı arasında pozitif bir ilişki vardır" ile "BY'nin kişiselleştirme stratejisiyle STK'nın performansı arasında pozitif bir ilişki vardır" biçimindedir. Elde edilen bulgular, BY'nin kodlama ve kişiselleştirme stratejilerinin Filistin'deki STK'ları seçtiğimiz bağımlı değişkenler olan finansal sürdürülebirlik, örgütsel süreç/ işler ve program/ proje performansları açılarından önemli derecede etkiledigini göstermektedir. Bununla beraber, sadece kodlama stratejisinin finansal sürdürülebilirlik üzerinde pozitif bir etkisi olduğu hakkındaki alt hipotez kanıtlanamamış, bu nedenle modelden çıkarılmışlır. Her iki BY stratejisinin de STK'ların performanslar, üzerindeki positif etkileri olduğunu ifade eden diğer alt hipotezlerin hepsi kanıtlanmıştır. Elde edilen bulgulara göre çalışmada, Filistin STK'larındaki karar-vericilere, örgütsel performansı artırmak üzere BY stratejilerini uygulamaları için bazı önermelerde bulunulmuştur.

Anahtar Sözcükler: *Bilgi yönetimi stratejileri; şifreleme stratejisi; kişiselleştirme stratejisi; sivil toplum kuruluşları (STK'lar); STK'ların performansı; finansal sürdürülebilirlik; organizasyon süreci/ işlevi; program/ proje performansı; Filistin.*

Introduction

As a result of the modern era of globalization, technological advancement, increasing competition, and the influence of modern information and communication technologies, the "knowledge community" has emerged. According to a literature review on Knowledge Management (KM), it is well known that knowledge has become an engine of social, economic and cultural of the status quo (Çavuşoğlu, 2016). Recently, KM has become a well-known concept, and the skill to effectively create, use and disseminate knowledge has assumed importance for organizations, but the process of knowledge acquisition itself does not provide strategic benefits (Zack, 2002). Therefore, organizations must effectively manage this knowledge draw benefits from existing skills and experience, as well as to benefit from the tacit knowledge belonging to the employees. In particular, Non-Governmental Organizations (NGOs) are facing a high rate of fluctuations; once employees leave an organization, their ideas and accumulative experiences leave with them, which means that new employees must undergo a re-learning process, and NGO members must dedicate some of their experience and their time to teach them. Moreover, the organization also experiences a loss of tacit knowledge from these employees. When collaboration is not encouraged and individuals are not rewarded for sharing

this tacit knowledge and transferring it into explicit knowledge, this may cause the loss of valuable organizational assets and resources as employees take knowledge with them when they leave (Uriarte, 2008). Therefore, keeping knowledge in the minds of a key employee, as well as in filing cabinets and databases, meaning that it is not supplied at the appropriate time for the relevant people, is of little value (Gammelgaard and Ritter, 2005).

The present study sought to examine the effect of KM strategy on the performance of NGOs in Palestine. The KM strategy is part of KM. According to a literature review regarding KM strategies, two very different strategies were identified: The codification strategy and personalization strategy (Hansen et al., 1999; Greiner et al., 2007; Ng et al., 2012; Liu et al., 2013; Venkitachalam and Willmott, 2017).

Palestinian Non-Governmental Organizations (PNGOs) play a central role in the social and economic life of the Palestinian Territories, and one of the primary reasons for this is the Israeli occupation and the security measurements imposed by this occupation. Recently, the performance and effectiveness of NGOs have taken on extra urgency because of increasing demands for accountability, transparency, and financial responsibility (Lecy et al., 2012). Additionally, Olimpia (2014) argued that NGOs should be motivated to use KM strategies and that NGO donors and stakeholder's requirements include advanced electronic systems to demonstrate how they perform their operations and to track and update the progress of projects, operations, and expenditures. Moreover, new threats and opportunities always emerge due to changes in government legislation and regulatory practices. Also, the beneficiaries of NGOs are demanding services that meet their needs and offer high quality, thus forcing organizations to communicate quickly and with personalized interaction with their beneficiaries online. Therefore, it has become necessary to reconsider the approaches or strategies used to improve performance.

However, what is the role of KM strategies in enhancing NGOs' performance? This question remains a challenge for organizations of all kinds and forms. Therefore, this article attempts to examine the impact of KM strategies on the performance of NGOs, of PNGOs in particular, highlighting the most relevant financial and non-financial performance measurement. Hence, senior managers can make use of the performance measurement suggested in this study, which includes "financial sustainability, organization process/function, program/project performance".

Today, although the KM literature discusses the importance of KM as a means of improving organizational performance, it does not sufficiently examine the KM strategies of "codification" and "personalization", in particular in terms of their impact on NGOs' performance. This considerable gap in the research on NGOs demonstrates the significance of this paper. Besides, it aims to create awareness among these organizations on the importance of KM strategies as a means of accomplishing high performance.

Theoretical Background of KM Strategy

KM has deep roots. The investigation of knowledge dates back to ancient Greece, and in 1959, Peter Drucker first introduced the concept of information society and the term "knowledge worker" (Drucker, 1990). However, it was Karl Wiig who first coined the term "knowledge

management" in 1986, and after a United Nations conference, a more in-depth 'knowledge management' practice was launched (Wiig, 1994). The concept of KM within organizations was not highlighted until the 1990s in terms of its benefits for providing competitiveness to organizations (Dutta, 1997). Concerning the studies on KM as a discipline, Sağsan (2009) indicated that it should be assessed from interdisciplinary perspectives, based on business and administration sciences, library and information science, communication science, and technology science. Brauner and Becker (2006) indicated that knowledge is perceived to be rooted within individuals and can only be obtained by direct experience or generated by thought, otherwise, it will remain as data or information. While KM has been defined in various ways, there is no precise description of it that can clarify the entire picture. However, according to most academicians and professionals, KM can be defined as a process for controlling both tacit and explicit knowledge to give organizations high value (Wai el at., 2010; Ng el at., 2012). Sağsan (2006) argued that the KM process is evaluated in a new design called the "life cycle of knowledge management" that consists of knowledge creation, sharing, structuring, using, and auditing. According to the researchers' opinion, it can be said that 'KM involves exploring and exploiting knowledge to create value through knowledge collection, processing, distribution and application activities'.

Today, many organizations, especially those that work in a competitive environment, realize the importance of KM practices. KM is not about KM for the sake of knowledge, but the ultimate goal is to create value and maximize the knowledge assets of the company to achieve specific objectives that serve their goals and strategies through the synergy of people, processes, and technology. According to Liebowitz (2016), KM is based on three components. The "people" side is about a knowledge-sharing environment and culture can be generated in the company, the "process" side is about managing the 'KM' processes, while "Technology" refers to the creation of a unified platform that facilitates the communication and sharing of knowledge among employees.

> A knowledge strategy describes the overall approach an organization intends to take to align its knowledge resources and capabilities to the intellectual requirements of its strategy (Zack, 1999, p. 135).

The KM strategy indicates the organization`s means of achieving its knowledge strategy and illustrates the (organizational and technological) tools, processes, and infrastructures, through which the knowledge can flow effectively within the organization (Zack, 2002). Thus, the KM strategy of an organization is described as how the firm manages its knowledge base. Hansen et al. (1999) identified two different strategies for KM, namely the strategies of codification and personalization.

Codification Strategy

The Codification strategy is a "people-to-documents" approach (Hansen et al., 1999; Greiner et al., 2007; Ng et al., 2012; Liu et al., 2013; Venkitachalam and Willmott, 2017).

> The codification strategy has the objective of collecting knowledge, storing it in databases, and providing the available knowledge in an explicit and codified form (Greiner et al., 2007, p. 5).

The codification strategy is presumed to be successful and effective for companies whose business strategy demands the utilization and reuse of existing knowledge (Hansen et al., 1999; Malhotra, 2004). In short, firms that adopt a codification strategy focus on capturing and storing knowledge in explicit forms that facilitate the retrieval of knowledge by employees and the use of electronic devices to express their knowledge. Venkitachalam and Willmott (2017) suggested certain applications that can be used to facilitate the codification strategy such as intranets, corporate wikis, shared databases, document management systems, and enterprise information portals.

Personalization Strategy

The strategy for personalization is based on a "person-to-person" approach (Hansen et al., 1999; Greiner et al., 2007; Ng et al., 2012; Liu et al., 2013; Venkitachalam and Willmott, 2017). It has the objective of transferring, communicating, and sharing tacit knowledge via knowledge networks such as discussion forums, and IT is used to help people communicate their knowledge, not to store knowledge (Hansen et al., 1999). The personalization strategy is presumed to be successful and effective for companies that focus on generating new or customer-specific solutions or more innovations (Hansen et al., 1999; Greiner et al., 2007; Zanjani et al., 2008). Venkitachalam and Willmott (2017) indicated some applications that can be used for the personalization strategy such as corporate yellow pages, online forums, discussion groups, blogging, a community of practice, and even social networking (Facebook, WhatsApp, Skype, Twitter, Instagram, etc.).

Performance Measures in NGOs

NGO's have important roles in non-formal interventions including health, education and primary care, etc. Today, the stakeholders, the agencies of the donor, and practitioners for relief and development all ask questions such as: Do NGOs do what they preach? How are we going to know? How successful are the services and projects they have? (Lindenberg and Bryant, 2001; Aboramadan, 2018). These questions mean that it is necessary to measure and examine the efficiency and effectiveness of the financial and non-financial assets of NGOs.

The importance of using performance measurement and management in organizational management structures, processes and strategies have been widely illustrated in the literature on the performance measurement and management of NGOs (Teelken, 2008; Ramadan and Borgonovi, 2015). Ramadan and Borgonovi (2015) indicated the importance of measuring and managing performance since these organizations concentrate on the use of performance information in decision-making, which is considered a requirement for strategic planners of NGOs to enhance their functions. Additionally, it is closely linked to the budgetary process within NGOs as these organizations are fundraising-oriented, which is another reason why performance evaluation and management in NGOs is required. According to Ramadan and Borgonovi (2015), there is a need for more transparency, which has increased the demands for financial responsibility and accountability due to the pressure on NGOs from stakeholders to reveal how they are conducting their operations.

In NGOs literature, many authors offered a number of measures that should be taken into account when measuring and evaluating NGOs' performance. To name a few, (Ritchie and Kolodinsky, 2003; Buckmaster, 1999; Poole et al., 2000; Epstein and Buhovac, 2009; Poister, 2008; Tom and Frentzel, 2005; Kendall and Knapp, 2000; Miller, 2007; Carman, 2007); Ramadan and Borgonovi, 2015). The measure of performance in this paper will be guided by the comprehensive framework of performance measurement and management in NGOs postulated by Ramadan and Borgonovi (2015) in their recent study focused on measuring the performance of NGOs. This tool is useful as it will not only include common financial measures, but also additional contexts such as organization process/function and program/project performance. It is also important to treat these NGOs as project-based organizations.

This research will also shed some light on management performance, whereas most previous researches on performance measurement frameworks have focused on project performance and ignored organizational process performance (Ramadan and Borgonovi, 2015). Hence, there is a strong need to rely on a framework that covers all the areas of NGOs. This framework can assess their performance by creating performance measurement and then gathering information related to this measurement. The main performance measures proposed to be used are as follows: The first measurement is financial sustainability, which involves three dimensions: fundraising efficiency, financial transparency, and program financial efficiency. This determined the organizational process/function as the second measurement for assessing NGOs' performance, which is focused on human resources and organizational culture, while the final measurement is program/project performance, which is measured by program outcomes (effectiveness), program non-financial efficiency, program impact, partnership, and quality. These are demonstrated in Table 1.

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729

Table 1

Overall NGO's Performance Measures

Performance Measures	Definition
Financial Sustainability	Sustainability is the ability of an organization to use its available resources and to consistently look for different resources without full reliance on one source of financing (Cannon, 1999). Financial statement analysis offers the stakeholders' insights into the financial situation of the organization (e.g., Where has the money come from? For what purpose has it been received? How has it been spent? What are the outcomes of the operation?) What facilitates better planning and monitoring of activities? (Lewis, 2009).
• **Fundraising Efficiency**	It is the most important measure in assessing the financial performance of NGOs. Efficiency in fundraising is defined as a process of obtaining funds for the survival of NGOs (Andreasen et al., 2008; Ramadan and Borgonovi, 2015).
• **Financial Transparency**	NGOs must provide information on their financial activities by preparing reports and making them accessible to stakeholders (Ramadan and Borgonovi, 2015). Therefore, transparency can only be achieved by maintaining complete records and disclosing them.
• **Program Financial Efficiency**	The best use of financial resources acquired to achieve the desired results and services (Barman, 2007; Kendall and Knapp, 2000; Ramadan and Borgonovi, 2015). This measures the relationship between financial inputs and outputs (Ramadan and Borgonovi, 2015).
Organizational Process/Function	
• **Human Resources**	Human Recourses are the pool of human capital under the firm's control in a direct employment relationship (Wright et al, 1994).
• **Organizational Culture**	It is what the organization's employees perceive and how this perception creates an example of values, norms, and expectations (Ramadan, 2017).
Program/Project Performance	
• **Programs Outcomes (Effectiveness)**	The extent to which an organization is achieving its objectives and goals (Fine and Snyder, 1999). Besides, other researchers depend on the outcomes to refer to effectiveness. Morley et al. (2001) suggested that the outcomes are the consequence of an organization's program or project.
• **Program Non-Financial Efficiency**	The best use of the non-financial resources acquired to achieve the desired results and services (Barman, 2007; Kendall and Knapp, 2000; Ramadan and Borgonovi, 2015). This measures the relationship between the non-financial inputs and the outputs (Ramadan and Borgonovi, 2015).
• **Program Impact**	Considers the long-term ability to meet objectives or addresses the degree to which the overall goal of a program is accomplished (Ramadan and Borgonovi, 2015).
• **Partnership**	A partnership is measured by the number of partners and the as well as the degree of communication between them and their satisfaction (Ramadan and Borgonovi, 2015).
• **Quality**	Quality is measured by donors' satisfaction and the quality of services provided by an NGO (Ramadan and Borgonovi, 2015).

Empirical Review and Research Hypotheses

Many scholars have attempted to measure the contribution of KM and KM strategies by using different models. Hansen et al. (1999) and Ng et al. (2012) indicated that 80% of the knowledge sharing should follow one strategy, and a second strategy should be used to assist the first one (20 percent). Indeed, some literature has emphasized the equivalence between codification and personalization in the context of strategic KM because of an exclusive emphasis on codification or personalization results in fragmented and uncoordinated efforts (Ng et al., 2012; Venkitachalam and Willmott, 2017). However, the equivalence ensures the strategies' efficacy and increases the organization's performance (Tseng, 2010; Ng et al., 2012). Some studies have mentioned that the influence on the performance of each KM strategy may vary. Storey and Kahn (2010) and Maroofi et al. (2013) indicated that the personalization strategy may be more valuable in improving competitiveness than the codification strategy. Nonetheless, other researchers have found that impact an explicit KM strategy is greater than that of a tacit strategy on firm performance (Keskin, 2005; Maroofi et al., 2013).

According to the discussions of previous studies, researchers have offered convergent results showing that KM and KM strategy influence the performance of the studied organizations (Maroofi et al., 2013; Gholami et al., 2013; Muliro,2017; Mekonnen, 2017; Jaber and Caglar, 2017; Gakuo and Rotich, 2017; Abuaddous et al., 2018). Mekonnen's (2017) study showed a relationship between KM components (organizational knowledge practices, organizational culture, and information technology) and organizational performance in NGOs. Additionally, Gholami et al. (2013) demonstrated that KM practices positively and significantly influenced their organizational performance. The researchers pointed out that, regarding financial performance, there are results that show KM and KM strategies influence the financial performance of the studied organizations. Maroofi et al. (2013) observed that codification and personalization have a greater impact on financial performance, followed by the performance of procedures and internal performance. Abuaddous et al. (2018) found that KM, including knowledge process and technology capabilities, has a positive impact on organizational performance either directly (new market success, customer service, market share) or indirectly (financial performance).

Regarding human resources management, research indicates that the practices that develop individuals' abilities increase the organization's performance, which promotes the creation and flow of knowledge that can generate innovation (Pandey and Dutta, 2013; Collins and Clark, 2003; Olimpia, 2014). Also, Olimpia (2014) indicated that the main features of KM in NGOs, in addition to proper human resources practices, are important for strengthening their organizational culture, volunteering-based activities, and organizational learning process. Furthermore, Muliro (2017) showed that culture, people and structure related factors of strategic KM are critical areas about organizational performance and productivity.

After reviewing the literature on KM strategies in the context of modern NGOs, it is evident that there is a significant research gap in terms of the relationship between KM strategies and NGO performance. Therefore, we propose a set of hypotheses assuming that each of the KM strategies contributes positively to NGO performance. Additionally, by developing and examining the proposed research model shown in Figure 1, which explains the effect of the

independent variable (KM Strategies) on the dependent variable (NGOs' performance), the following hypotheses are proposed:

H1: There is a positive relationship between the codification strategy of KM and NGOs' performance.

H1a: Codification strategy has a positive influence on financial sustainability.

H1b: Codification strategy has a positive influence on organization process/function.

H1c: Codification strategy has a positive influence on program/project performance.

H2: There is a positive relationship between the personalization strategy of KM and NGOs' performance.

H2a: Personalization strategy has a positive influence on financial sustainability.

H2b: Personalization strategy has a positive influence on organization process/function.

H2c: Personalization strategy has a positive influence on program/project performance.

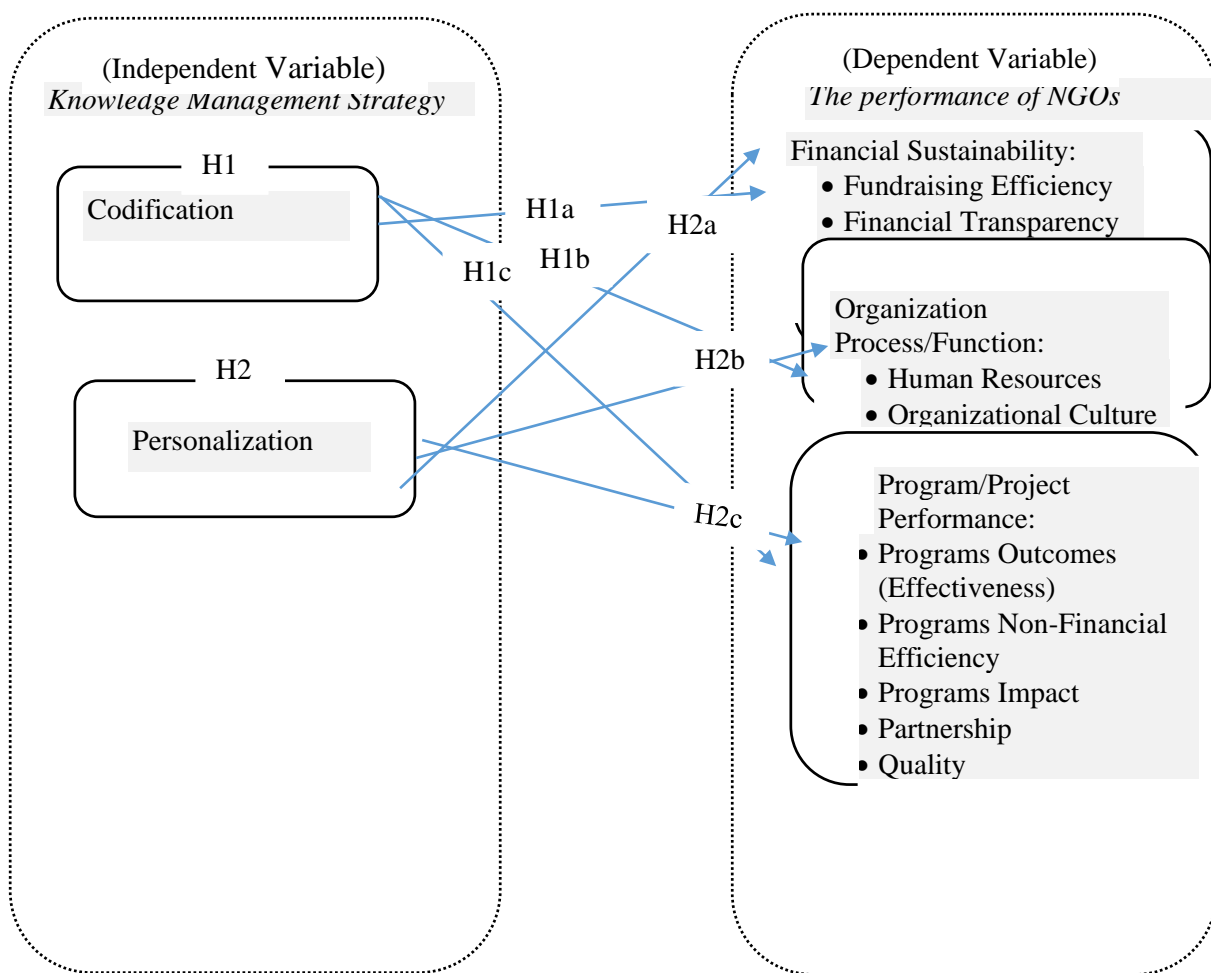*Figure 1*. Conceptual Model

Research Methodology

The main objective of this work is to investigate the role of KM strategies in terms of the impact on NGOs' performance. To fulfill the goal of this research work, this paper adopted descriptive categorization, and it followed a quantitative methodology, based on an electronic questionnaire survey that was designed to collect the required information.

Sampling and Data Collection

The research population consisted of 1.200 local and international NGOs actively working in different areas and serving in different sectors of the Palestinian territories. There are 1,080 active local NGOs according to the Palestinian Non-Governmental Organizations Network (PNGO), while there are 120 international NGOs according to the Palestinian Academic Society for the Study of International Affairs (PASSIA). The researcher chose the active NGOs because they have the experience, they are in a better position to provide the necessary information, and they are reachable by telephone and email. Moreover, they have the appropriate size and sufficient resources to apply KM strategies.

As a method of a survey for this research, electronic questionnaires were used due as they were deemed to be suitable. Sekaran and Bougie (2016) mentioned that the electronic questionnaire survey is best suited when a sample is geographically dispersed; one of the features of the electronic questionnaires is that a wide geographical area can be covered in the survey. Additionally, it can be used when it is not possible to conduct telephone interviews due to the costs involved. It is also difficult or even impossible to conduct personally administered questionnaires because of the Israeli occupation and the restrictions on entering some areas; hence, this shows the advantage of online survey research as it provides access to groups and individuals who would be difficult, or impossible to reach through other channels. Also, it is easier to administer and quick to deliver, as the questionnaire can be shared via a link and the answers will be automatically collected and recorded onto a personal Google Drive database. Therefore, this automatic processing of the survey saves further costs, time, and energy.

The questionnaire was distributed in the summer of 2019 over a period of 3 months (July- September) using a survey link. A total number of 291 questionnaires were distributed, where the sample size was based on a convenience sampling technique. The sample size for the research project was calculated using a table that provides a generalized scientific guideline for sample size decisions. This table was provided by Krejcie and Morgan (1970) and it shows that if the research population is 1200, the sample size should be 291. A total of 228 respondents completed the survey, in which the questions were obligatory and the participants were unable to send the questionnaire until questions had been answered. Thus, all the surveys had no missing data. The percentage of valid questionnaires recovered for analysis was 78%. The target respondents of the research were managers of NGOs or their representatives. More precisely, the questionnaire was limited to one employee per firm. They were chosen purposely since their opinions were deemed to be reliable since they understand and know more about NGOs than other workers in the organization, thus providing credible information relating to performance in general, and specifically the research variables.

Measurement Scales

The primary data collection process was conducted through structured questionnaires based on the review of the literature. Questions were derived from previous studies related to KM strategies and NGOs' performance to achieve the purposes of the study. It was clarified to the participants that all the information they provided would remain confidential, their identity would not be revealed, and it would only be used for scientific research. The questionnaire included three sections: Section A covers the respondents' demographic profile, including

personal and organizational information. Sections B and C are devoted to evaluating the effect of KM strategies on the NGOs' performance.

All measures are Five-point Likert scales, with 1 indicating no extent of application and 5 indicating a great extent of application. The sources and descriptions of the measures are explained in Table 2.

Table 2

Sources and Descriptions of the Measurement Scales

Constructs	Scale sources and descriptions
Knowledge Management Strategies • **Codification strategy** • **Personalization strategy**	Each part consists of 5 items, which are adapted from (Kumar and Ganesh, 2011). These items ask about the extent of their application within the NGOs in Palestine.
NGOs' performance	
• **Financial Sustainability**	Measured by fundraising efficiency, financial transparency and programs financial efficiency. It is examined using 10 items that are adapted from (Aboramadan and Borgonovi, 2016).
• **Organization Process/Function**	Measured by human resources and organizational culture. It is examined using 10 items that are adapted from (Onyango, 2016).
• **Program/Project Performance**	Measured by programs outcomes, programs non-financial efficiency, programs impact, partnership and quality. It is examined using 20 items that are adapted from (Aboramadan and Borgonovi, 2016).

Reliabilities and Validities of Measurement Scales

The design of the questionnaire instrument was prepared based on three articles. The results of these articles showed the validity of measures through test validity. Thus, this citation is considered good. Sekaran and Bougie (2016) explained that measures have been developed for many important concepts, and researchers can use the instruments already considered "good," instead of developing new ones. Hence, the researcher considered the study tool valid for measuring the intended purpose. Cronbach's alpha coefficient was used to evaluate internal consistency. The data in Table 3 shows the coefficient alpha's values for KM strategies to codification and personalization were 0.70 and 0.79, respectively. This indicates that the Cronbach's alpha's values for NGOs' performance were 0.68, 0.82 and 0.90 for financial sustainability, organization process/function, and program/project performance, respectively. Thus, all alpha coefficients ranged between 0.68 and 0.90 and were therefore above the threshold of 0.6 recommended by (Hair et al., 2014), which confirms the reliability of the questionnaire to test the hypotheses.

Findings

Table 3 below depicts the means, standard deviation, and Pearson's correlations for the research variables. The mean and standard deviation of the codification strategy are 4.06 and 0.60, respectively. The mean and standard deviation of the personalization strategy are 4.09 and 0.61, respectively. The mean and standard deviation of financial sustainability are 4.41 and 0.33,

respectively. The mean and standard deviation of the organization process/function are 4.32 and 0.39, respectively. The mean and standard deviation for program/project performance are 4.36 and 0.37, respectively. Relative Importance Index (RII) was applied in this study to measure the response related to the rating of each variable depending on their significance (Akadiri, 2011). The results show that the aggregate mean score and standard deviation for the questionnaire paragraphs on KM strategies and NGOs' performance had a "High" degree of importance according to the 5-point Likert scale adopted for the study. This means that the respondents agreed to all questionnaire paragraphs.

Also, Table 3 demonstrates the results of the Pearson Correlation test. All of the KM strategies constructs were significantly correlated with each other, and are significant at 0.01 level with a Pearson's coefficient of 0.631. Also, the Pearson's correlation coefficients indicate that the strategy for codification and the three performance measurement of NGOs is important with a correlation of 0.362 with financial sustainability, 0.457 with organization process/function, and finally, 0.466 with program/project performance. While the correlation coefficients between personalization strategy and financial sustainability, organization process/function, program/project performance are 0.477, 0.557 and 0.583 respectively. Thus, this result means that the relationship between KM strategies and NGO's performance measurement is positive and significant. Moreover, we can see that all the correlations between the KM strategies and the NGO's performance measurement are significant at the 0.01 level. This means that KM strategies are significantly associated with NGO's performance measurement. Thus, the researcher must determine if any predictive relationships exist between the dependent and independent variables through regression analysis.

Table 3

Descriptive Analysis, Correlations, Reliability of a Measure

Constructs	(1)	(2)	(3)	(4)	(5)
(1) Codification Strategy	1				
(2) Personalization Strategy	0.631**	1			
(3) Financial Sustainability	0.362**	0.477**	1		
(4) Organization Process/Function	0.457**	0.557**	0.481**	1	
(5) Program/Project Performance	0.466**	0.583**	0.593**	0.660**	1
Mean	4.06	4.09	4.41	4.32	4.36
Std. Deviation	0.60	0.61	0.33	0.39	0.37
Cronbach's Alpha	0.70	0.79	0.68	0.82	0.90
Skewness	-0.700-	-0.576-	-0.476-	-0.554-	-0.198-
Kurtosis	0.816	-0.033-	-0.137-	0.530	-0.665-

Note. **Correlation is significant at the 0.01 level (2-tailed). N= 228.
Source: SPSS Analysis.

Hypotheses Testing

Table 4

Multiple Regression Analysis Results

Model	Dependent Variable	Independent Variable	ANOVA Table (Significance of F)	Adjusted R Square	Standardized Coefficients (Beta)	VIF	Durbin - Watson	Cook's Distance, Maximum
Model 1	**Financial Sustainability**	Codification Strategy, Personalization Strategy	0.000	0.227	Codification Strategy (0.101) Personalization Strategy (0.413)	1.662	2.154	0.100
Model 2	**Organization Process/Function**	Codification Strategy, Personalization Strategy	0.000	0.323	Codification Strategy (0.175) Personalization Strategy (0.447)	1.662	2.067	0.158
Model 3	**Program/Proje ct Performance**	Codification Strategy, Personalization Strategy	0.000	0.351	Codification Strategy (0.163) Personalization Strategy (0.480)	1.662	2.182	0.075

Note. ** Significant at the 0.01 level, * Significant at the 0.05 level.

According to Hair et al. (2014), the assumptions of normality, multicollinearity, independence, and linearity should be tested before analyzing the data. Therefore, prior to the regression analysis, the researcher performed several diagnostics tests to establish the appropriateness of the data for making inferences and drawing conclusions.

The normality of the observed variables was evaluated by analyzing the skewness and kurtosis values. Table 3 above shows that the five research variables had skewness values ranging from -0.198- to -0.700. Additionally, the values of kurtosis ranged from -0.033- to 0.816. The results show that the estimated skewness and kurtosis values do not exceed the specified critical value (± 2.58), thus indicating that the sample follows a normal distribution, as recommended by (Hair et al., 2014).

Based on the results of the Multicollinearity test shown in Table 4, since value of the Variance Inflation Coefficient Factor (VIF) is 1.662, which is lower than (10), this means that there is no overlap between independent variables, indicating the strength of the research sample, as recommended by (Pallant, 2007).

Moreover, Table 4 shows that the Durbin-Watson value indicated no evidence of autocorrelation since the suggested value is not less than 1.5 and not higher than 2.5 (Andy, 2000).

Linearity can be easily analyzed by residual plots. The P-P Plot explains that all points are close to the straight line. Additionally, according to Table 4, the inspection of Cook's Distance indicates that there are no problems with potential outliers since the influence scores are less than 1.00 (Tabachnick and Fidell, 2013).

This study tested its six hypotheses using regression analysis. Three models were created to assess whether there were any predictive relationships between the dependent and independent variables. In this analysis, the independent variables were KM strategies namely "codification strategy and personalization strategy", while the dependent variables were NGOs' performance which were "financial sustainability, organization process/function, program/project performance". Hence, multiple regression analysis was performed to examine the acceptance/rejection of H1 and H2. As presented and discussed below:

The Adjusted R-square of Model 1 in Table 4 is 0.227 implying that 22.7% of the two variables "codification strategy, personalization strategy" describe differences in financial sustainability. According to the ANOVA table, the significance of F=0.000 (< 0.05), the ANOVA results revealed that the overall model, including the two main predictors of codification strategy and personalization strategy – is a significant predictor of financial sustainability. Furthermore, Standardized Coefficients (Beta) determined the practical significance of the relative predictive power of each dependent variable (Hair et al., 2014). The in-depth analysis showed that the personalization strategy was the strongest predictor ($\beta=0.413$, *P=0.000*) in comparison to the codification strategy ($\beta=0.101$, *P=0.179*). Also, these results show that the personalization strategy variable is statistically significant because the P-value is < 0.05, but the codification strategy variable is not statistically significant because the P-value is > 0.05. Hence, we exclude it from the model.

As shown in Table 4, Model 2 had an Adjusted R Square value of 0.323, implying that 32.3% of the variations in the organization process/function are explained by all independent variables. This model was also statistically significant since the significance of F equals to 0.000 (< 0.05). Additionally, Standardized Coefficients (Beta) determined the practical significance of the relative predictive power of each dependent variable (Hair et al., 2014). The in-depth analysis showed that the personalization strategy was the strongest predictor ($\beta=0.447$, *P=0.000*) in comparison to the codification strategy ($\beta=0.175$, *P=0.014*). These results show that both variables "codification strategy, personalization strategy" are statistically significant because the P-values are< 0.05.

Table 4 shows that Model 3 had an Adjusted R Square of 0.351, implying that 35.1% of the variations in program/project performance are explained by the two variables "codification strategy, personalization strategy". According to the ANOVA table, the significance of F=0.000 (< 0.05), The ANOVA findings revealed that the overall model, including the two main predictors–codification strategy and personalization strategy – is a significant predictor of the program/project performance. Moreover, Standardized Coefficients (Beta) determined the practical significance of the relative predictive power of each dependent variable (Hair et al., 2014). The in-depth analysis showed that the personalization strategy was

the strongest predictor (β=0.480, *P=0.000*) in comparison to the codification strategy (β=0.163, *P=0.019*). Also, these results show that both variables "codification strategy, personalization strategy" are statistically significant because their P-values are< 0.05.

Multiple Regression Analysis showed that both KM strategies have a statistically significant positive association with all NGO's performance measurement because F-test can explain the P-value is < 0.05, except for the hypothesis of the impact of the codification strategy on financial sustainability, which was dropped because of P-value > 0.05. Thus, the researcher rejected this hypothesis. Consequently, H1b, H1c, H2a, H2b, and H2c were supported, whereas H1a was not supported.

Discussion of the Results

The key goal of this research was to examine the role of KM strategies in the improvement of NGOs' performance. The study model is based on the codification strategy theory and the personalization strategy theory and it also contained financial sustainability, organization process/function, and program/project performance as NGOs' performance. The results of the multiple regression analysis showed that the personalization strategy is more significant in comparison with the codification strategy according to all measurement of the NGOs' performance. In comparison to previous studies in the research domain, some studies have mentioned that the performance effect of each "codification and personalization" KM strategies may vary (Storey and Kahn, 2010; Keskin, 2005; Maroofi et al., 2013). Hansen et al. (1999) also indicated that 80% of the knowledge sharing should follow one strategy and the second strategy (20%) should be used to support the first. However, recent studies have emphasized the equivalence between codification and personalization in strategic 'knowledge management', as the exclusive emphasis on codification or personalization contributes to sporadic and uncoordinated efforts (Ng et al., 2012; Venkitachalam and Willmott, 2017). Nonetheless, the equivalence ensures the strategies' efficacy and increases the organization's efficiency (Tseng, 2010).

Furthermore, the results showed that the codification strategy is not significantly related to financial sustainability, while the personalization strategy is significantly related to it. One possible reason for this is that the research population consists of both local and international NGOs; the researcher determined that most of the points in the questionnaire were implemented more in international NGOs compared with local NGOs, especially about financial sustainability in terms of fundraising efficiency. In this regard, it is found that to boost their financial performance, NGOs will benefit from implementing the personalization strategy, as they will have better financial results when it comes to raising funds, thus allowing the efficient and effective use of these funds. However, as indicated by studies such as Keskin (2005) and Maroofi et al. (2013), the impact of the explicit KM strategy is greater than the tacit direction on firm performance. Regarding financial performance in general, the researchers pointed out that there are results that show KM and KM strategies influence the financial performance of the studied organizations (Maroofi et al., 2013; Abuaddous et al., 2018).

The results also emphasize that the implementation of the codification strategy and personalization strategy will positively affect the organization's process/function in terms of

human resources and organizational culture. The findings are convergent and consistent with the findings of Muliro (2017), who showed that culture, people and structure related factors of strategic KM are critical areas concerning organizational performance and productivity. Additionally, Pandey and Dutta (2013), Collins and Clark (2003), and Olimpia (2014) indicated that the practices developed in individuals' abilities increase the organization's performance, thus facilitating the creation and flow of knowledge capable of generating innovation. Firms need to exploit the intellectual assets and capacity of their workers.

Besides, the findings indicated that both KM strategies are significantly related to program/project performance. Also, it should be noted here that the program/project performance with the personalization strategy was the strongest predictor. The study findings are consistent with Olimpia (2014), who argued that the motivations to use KM strategies in NGOs and that NGO donors and stakeholders' requirements include advanced electronic systems to demonstrate how they perform their operations and to monitor and document on the progress of programs, operations and expenditures finance. In general, the results of this research suggest that this goal has been achieved. The researchers have indicated there are convergent results that show that KM and KM strategy influence the performance of the studied organizations (Maroofi et al., 2013; Gholami et al., 2013; Muliro,2017; Mekonnen, 2017; Jaber and Caglar, 2017; Gakuo and Rotich, 2017; Abuaddous et al., 2018).

Managerial Implications

Above all, the strong desire for the effective implementation of KM arises from the organizations' need to accomplish their objectives. Thus, the directors or managers should have a thorough understanding of the business target and goals so that they can choose the KM strategy and objective accordingly. The 'Knowledge Strategy' needs to be closely related to the companies' business plan of action (Davenport and Prusak, 1998; Zack, 1999).

The findings of this study have important implications for managerial practice that can enhance KM strategies in NGOs and other organizations in Palestine. Implementation of the codification strategy was found to positively influence NGOs' performance in Palestine. Therefore, the management of NGOs should enhance all activities related to the codification strategy, which focuses on collecting knowledge, storing it in databases, and providing the available knowledge in an explicit and codified form. Activities that mirrored this: Writing down and documenting the insights that are gained during work, and its flow should be enhanced to facilitate the transmission of tacit knowledge. Capturing in writing/audio/video the experiences narrated by employees. Recording important data, drawings, and experiences for future use. Dedicating a team of employees for archiving drawings, reports, and other such valuable information. Operating a storage facility such as an online repository to store project-related knowledge.

Moreover, the implementation of the personalization strategy was also found to positively influence NGOs' performance in Palestine. Managers of NGOs should consider enhancing their practices associated with using this strategy, which focuses on conversations, sharing of tacit knowledge between individuals, and generating new knowledge. Some activities that reflect this include: Reviewing beneficiaries' feedback in team meetings for use as a learning experience. Holding routine review meetings to discuss work progress and

generate new ideas. Sharing learning and experiences with others after returning from an official trip. Allowing members of the organization to enter different groups to share existing knowledge and create new knowledge, such as communities of practice, learning, and technology groups. Making a "Person's Guide" available to identify employees with given expertise to exploit the intellectual assets and capacities of the workers. Management of NGOs should enhance collaboration among organizational members in the development and use of new knowledge and ideas as well as promote all practices that foster the utilization of knowledge concerning NGO performance.

In this regard, it is found that NGOs will achieve better performance by using a combination of both codification and personalization KM strategies in terms of financial and non-financial performances. They will achieve improved performance from the financial aspect in terms of generating funds, utilizing these funds and financial resources efficiently and effectively to achieve the required or the planned outputs. These practices develop individuals' abilities and improve performance to meet the needs of NGOs' beneficiaries and the requirements of NGOs' donors and stakeholders.

Conclusion, Limitations, and Recommendation for Further Research
This research attempts to enrich the literature and contribute to the body of knowledge-related studies, especially in developing countries, by enriching the topic with new results that can be added cumulatively to the findings from previous studies, and these relationships are new areas of the body of knowledge within the NGO context. Furthermore, the researcher highlights management issues related to the effect of KM strategy on NGOs' performance. Previous researches on NGOs have most adopted sociological, psychological, ethical, and economic approaches, while there have been very few studies in the management sector. Additionally, the researchers believe that this study includes results that are valuable to managers of NGOs because it sheds light on the performance measurement of NGOs as well as how to measure and improve their performance. The study concludes that NGOs in Palestine can benefit from the implementation of KM strategies including codification and personalization strategies for enhancing and improving their performance. However, the codification strategy does not affect financial sustainability (one of the NGO's performance measurement).

The research, however, has some limitations. The primary focus of the study is on the Palestinian territories, which has certain constraints because the situation is not stable as a result of the Israeli occupation and political interference. Moreover, the study results cannot be generalized further, as a result of differences in terms of culture, religion, and customs, etc.

The researcher recommends that more studies should be conducted on KM or KM strategies as these topics are still developing and thus require further research and investigations. It is also recommended that future research should focus on validating the findings and conclusion of this study by undertaking similar researches in other organizations in Palestine. Besides, more researches should be conducted on the same subject in other countries and environments, especially in developed countries with advanced technological development to compare intellectual and cultural perspectives and the differences between organizations and countries.

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