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THE IMPACT OF A CROWDSOURCING APPARATUS ON ORGANIZATIONAL CAPACITY IN THE NONPROFIT CONTEXT: THE CASE OF BAR-KAYMA

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BY

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Abstract

While there is considerable information on the crowdsourcing (CS) phenomenon among online and for-profit organizations (Kittur, Chi, & Suh, 2008; Sufen, Zhonghui, & Feng, 2013), our understanding about the phenomenon among nonprofit organizations is limited (Brabham, 2008). The purpose of this dissertation is to examine how integrating a CS apparatus among nonprofit organizations impacts their capacity. The study drew on Hall et al.'s (2003) conceptual model, in which the capacity of a nonprofit organization is determined by its financial, human resources, and structural capitals.

Bar-Kayma (BK), a nonprofit umbrella organization that assists groups of Organized Artists Collectives (OACs) in Jerusalem, was used as a case-study. Beginning in May 2016, BK implemented a CS apparatus, called BanKayma (BNK). Participants in the research included fifteen individuals associated with BK. A quasi-experimental interrupted time-series design was formulated, and a mixture of quantitative and qualitative techniques were utilized to evaluate the impact of BNK on each of BK's three organizational capitals. Financial capital was evaluated using an interrupted time-series model. Human resources and structural capital were evaluated using a combination of quantitative and qualitative techniques. Quantitative analyses included descriptive statistics, t-tests, and ARIMA. Qualitative analyses relied on the empirical phenomenology approach, to investigate participants' experiences.

The results show that BNK had a positive effect on BK's financial and human resources capitals. While quantitative analyses did not yield evidence for a change in the organizational structural capital, qualitative analyses led to reconstruction of the causal relationships, as BK's structural capital was high prior to the implementation of BNK, and remained so afterwards. Intrinsically, the dissertation describes how a nonprofit organization that implemented a crowdsourcing apparatus successfully increased its capacity. The documented empirical experience of BK will provide entrepreneurs in other locations the example of the BanKayma model. Future research may draw on this study through replicating the examined CS apparatus and evaluating the suggested impact model in similar environments. Finally, this study provides an unprecedented documentation of empirical implementation of a CS apparatus within a nonprofit organization. As such, it has the potential to contribute to our understanding of motivational conditions for crowd participation.

Dedication

לזכר אבי, ד"ר אריה שם-טוב

In memory of my father, Dr. Arie Shem-Tov

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List of Abbreviations

Abbreviations	Explanation
BK	*Bar-Kayma* is the nonprofit organization that was used as a case study in this research. The organization aims to foster independent and innovative enterprises in Jerusalem, Israel. It is an overarching organization that supports and brings together organized groups of artists and activists in Jerusalem (OACs).
BKOC	*BK's Overhead Charge* is the payment of each OAC to BK, which is 7% of that OAC's income. BK's net income is comprised solely of these payments.
BNK	*Bankayma* is a crowdsourcing apparatus initiated by Bar-Kayma in May 2016. Interchangeably referred to as "the intervention".
CS	*Crowdsourcing* is the outsourcing of an organizational function to a given online community.
MSCM	*Modified Success Case Method* is a method to evaluate the impact of a new intervention on nonprofit organizations (Coryn, Schroter, & Hanssen, 2009).
OAC	*Organized Artists Collective* is a group of individuals that operate within BK's network.
OPM	Each *OAC* has a *Project Manager* who represents that OAC in the network.
SCM	*Success Case Method.*

Chapter 1:

Introduction to the Study

In 2009 The San-Francisco Symphony used a crowdsourcing (CS) mechanism to gather musicians and to form a “collaborative online orchestra” (Linden, 2010, p.247). This involved 3,000 musicians who applied, of which 96 were selected, and an audience of over 15 million ” (Linden, 2010). Following Hurricane Katrina, 60,000 records were entered by volunteers from all over the world to PeopleFinder (Murphy & Jennex, 2006), a CS endeavor that keeps records on missing people. These are two examples of how CS tools have been used in the public and nonprofit context. While recent literature increasingly refers to CS as a phenomenon that gradually changes social formations, and although the phenomenon is widespread, our understanding of it is limited (Sufen et al., 2013). Although scholars across various disciplines delved into the heuristic process, research on crowdsourcing is still in its early phases and focuses primarily on the business structures of for-profit organizations (O’Reilly, 2011; Vukovic & Das, 2013). Through a case study approach this dissertation evaluates how the implementation of a crowdsourcing apparatus within a nonprofit organization impacts its capacity.

The subject of the case study is Bar-Kayma (BK), a nonprofit organization located in Jerusalem, Israel. BK is a registered association that assists and accompanies groups of artists, professionals and specialists, and supports local and independent initiatives, projects and platforms. These groups comprise BK's organizational network and are defined as Organized Artist Collectives (OACs). Every OAC designates a project manager who functions as the contact person between BK and the particular OAC. In this setting, BK serves as an overarching organization that makes a pivotal node in its network and provides consultation, management and bureaucratic services for all member OACs. A list of BK's OACs is presented in Appendix A.

In June 2015 BK began to develop a CS apparatus to achieve its goals, which took effect in May 2016 under the name BanKayma (BNK). As such, BNK is an initiative that aims to reform BK's organizational structure. My primary research question is the following: Can BK improve its organizational capacity through the implementation of BNK? BK's board accepted my proposal to conduct this research. Additionally, the Human Subjects Research Committee at Binghamton University approved this research.

Evaluating organizational capacity requires a preliminary identification of aspects for tracking and measurement. Scholars agree that while it is a challenging task, it is both essential and feasible among nonprofit organizations (Poister, 2008). The study draws on Hall et al.'s (2003) conceptual model, by which capacity of a nonprofit organization is evaluated by the accumulation of the organization's "financial capital, human capital, and structural capital" (p. 4). Accordingly, three respective operational indicators are specified in this study for evaluating BK's organizational capacity: BK's income, BK's audience size, and BK's members' satisfaction. These indicators were tracked on an ongoing basis throughout the research period.

Statement of the Problem

While an increasing number of organizations rely on CS apparatuses to achieve their goals, there is a gap in the literature regarding the adoption of new CS apparatuses by existing nonprofit organizations. The ultimate rationale of the study is that the implementation of a CS apparatus may increase the capacity of a nonprofit organization. An Apparatus is defined as "the functional processes by means of which a systematized activity is carried out" ("Apparatus," n.d.). Focusing on BK as a nonprofit organization and on BNK as a CS apparatus, this dissertation intends to examine whether the organizational capacity of BK will change as a consequence of the adoption of BNK. BK launched BNK in May 2016 as a crowdsourced administrative instrument with the aim of advancing its capability to achieve its organizational goals.

The goal of this study is to evaluate the impact of a CS apparatus implementation on organizational capacity in the nonprofit context. BK's financial, human resources and structural capitals were assessed in order to evaluate the impact of BNK on BK's organizational capacity. Data were collected during nine months from the initiation of BNK and incorporated organizational records, surveys, and semi-structured interviews and questionnaires.

Research Question and Hypotheses

My primary research question is: Can BK improve its organizational capacity through the implementation of a crowdsourcing apparatus? Following the intervention (implementation of BNK to BK's organizational structure) the following hypotheses were tested:

H_1: Those months prior to the intervention will have lower financial capital than those months after the intervention.

H_2: Those months prior to the intervention will have lower human resources capital than those months after the intervention.

H_3: Those months prior to the intervention will have lower structural capital than those months after the intervention.

Definition of Terms (alphabetical order)

- *Bankayma (BNK)* is a crowdsourcing platform initiated by Bar-Kayma and was implemented and integrated within its organizational structure beginning in May 2016.
- *Bill* is a robot that communicates with artists on one hand and with service and equipment suppliers on the other hand, and allows them to receive or make payments, order services, etc. Bill can be initiated by email or through a link to an online form.
- *Crowdfunding* is a crowdsourcing-based fundraising method whereby numerous individuals invest a small amount for the sake of completing a large project, in contrast to traditional methods that entail raising large amounts from a small group of investors(Belleflamme, Lambert, & Schwienbacher, 2014).

- *Crowdsourcing Organizational Approach* is the way in which an organization examines each of its functions and its preference to crowdsource according to cost effectiveness feasibility terms.
- *Crowdsourcing Research* refers to scientific research using crowdsourcing mechanisms. Tools that rely on the phenomenon by collecting user input on the web have emerged (e.g., surveymonkey.com, Qualtrics.com) and ameliorated researchers' access to individuals in various populations, and thus improved their samples (Kittur et al., 2008).
- *Jerusalemite.org* also known as *MessyBoat,* is one of BNK's features which provides an online index of cultural events and locations in Jerusalem.
- *Online Communities* are the crowds. They have "the opportunity to respond to crowdsourcing activities promoted by the organization, and they are motivated to respond for a variety of reasons" (Brabham, 2013, p. 6). Hitrecord.org is an example of such a community.
- *Organizational Capacity* is the accumulation of the organization's "financial capital, human capital, and structural capital" (Hall et al., 2003, p. 4)

Theoretical Approach

Through a case study approach, this dissertation evaluates how implementation of a CS apparatus affects the capacity of a nonprofit origination. Subsequently, two bodies of literature were reviewed in the context of nonprofit organizations: Organizational behavior and social networks. Moreover, the case study approach is explained, organizational capacity is defined, and the conceptual evolution of the CS phenomenon is reviewed.

The term crowdsourcing was first conceptualized by Howe (2006) who defined it as "the act of taking a job traditionally performed by a designated agent and outsourcing it to an undefined, generally large group of people in the form of an open call" (Howe, 2008, p. 1). Howe argues that while crowdsourcing is not a contemporary phenomenon (for instance, when the police publish a 'wanted' ad, it crowdsources the job of locating a person), only recently has it drawn the attention of scientific scholars. Literature increasingly refers to crowdsourcing as a phenomenon that gradually changes social formations (Sufen et al., 2013).

There are numerous examples of successful crowdsourcing initiatives, such as Wikipedia and Amazon's Mechanical Turk (mturk.com), in which "anyone can post tasks to be completed and specify prices paid for completing them (…) Tasks typically require little time and effort, and users are paid a very small amount upon completion" (Kittur et al., 2008, p. 453). Although the phenomenon is widespread, research on crowdsourcing is still in its early phases and focuses primarily on business structures of for-profit organizations (O'Reilly, 2011; Vukovic & Das, 2013). This research seeks to evaluate crowdsourcing's influences on the institutional capacity of nonprofit organizations.

Since 2008 gradually increasing attention to crowdsourcing is evident in the literature across a variety of disciplines. In view of the fact that crowdsourcing was only recently conceptualized, and inasmuch as it was being delved into amid multiple areas, it is not surprising to find a lack of consensus around a single definition across all fields and scholars. In the second chapter of this dissertation I provide a rationale for the definition used in this study, i.e., *crowdsourcing* is an outsourcing of an organizational function to a given online community. Then, I conceptualize the *crowdsourcing organizational approach* as the ability of an organization to examine each of its functions with a preference to crowdsource according to cost effectiveness feasibility.

Brabham approached CS as "an online, distributed problem-solving and production model that has emerged in recent years" (Brabham, 2008, p. 75). He took an economic approach in cost-benefit terms, focusing on innovative methods for capitalizing a crowd of creative individuals, arguing that the lessons learned from the for-profit utilization or CS are applicable to nonprofit organizations.

There is extensive literature on organizational change, which is "both qualitative and quantitative in nature" (Bamford & Forrester, 2003, p.456). This study builds on Lewin‘s Planned Approach to organizational change which he conceptualized as a designed transformation from one state to another (Burnes, 2004; Lewin, 1947). Lewin suggested an investigation of such change through his model of action research. Evaluating performance and capacity of nonprofit organizations received scholarly attention in the last decades. Poister (2008) argues that conducting such an evaluation has the potential to yield greater probability for that organization to achieve its goals as a result of taking actions that follow the evaluation. Coryn, Schroter, & Hanssen (2009) conceptualized the evaluation of successful interventions within a nonprofit organization. They defined three facets for its composition: 1. Stakeholders (BK's executives and board members), 2. Consumers (OACs), and 3. The larger community (OACs' audience). One of the core aspects for consideration is the identification of objective indicators for evaluating organizational capacity. While such evaluations may involve quantitative measurements of performance and customer satisfaction, there is no agreement in the literature, and more specifically in the field of public management, on a singular guideline for conducting a process of identifying such indicators (Poister, 2008).

Greenwood & Levin (2006) build on Lewin's (1948) distinction of three stages of social change process: (1) Breaking up existing structures, (2) Altering them, and ultimately (3) Assembling them into a modified structure. However, they argue that the third stage might not be applicable, as social changes constitute dynamic processes with no granted final phase.

This study approaches organizational capacity evaluation through the multidimensional framework of Hall et al. (2003), by which capacity of a nonprofit organization is viewed as the organization's "financial capital, human capital, and structural capital" (p.4). Following a preliminary discussion with BK's executives and board members, this study assessed BK's capacity by examining three respectively evaluable aspects: BK's net income, the OACs' audience size, and the satisfaction rate of BK's members.

Methodology Overview

Currently, the BK network encompasses twenty OACs and three BK self-initiative projects. BK's board has given its consent to conduct the research, to include crowdsourcing in its organizational network, and to provide free and full access to its organizational records and databases. BK extended invitations to all OACs to participate in the research via e-mail along with consent forms to verify their participation. The organizational capacity of the OACs was measured prior to the intervention and throughout the research.

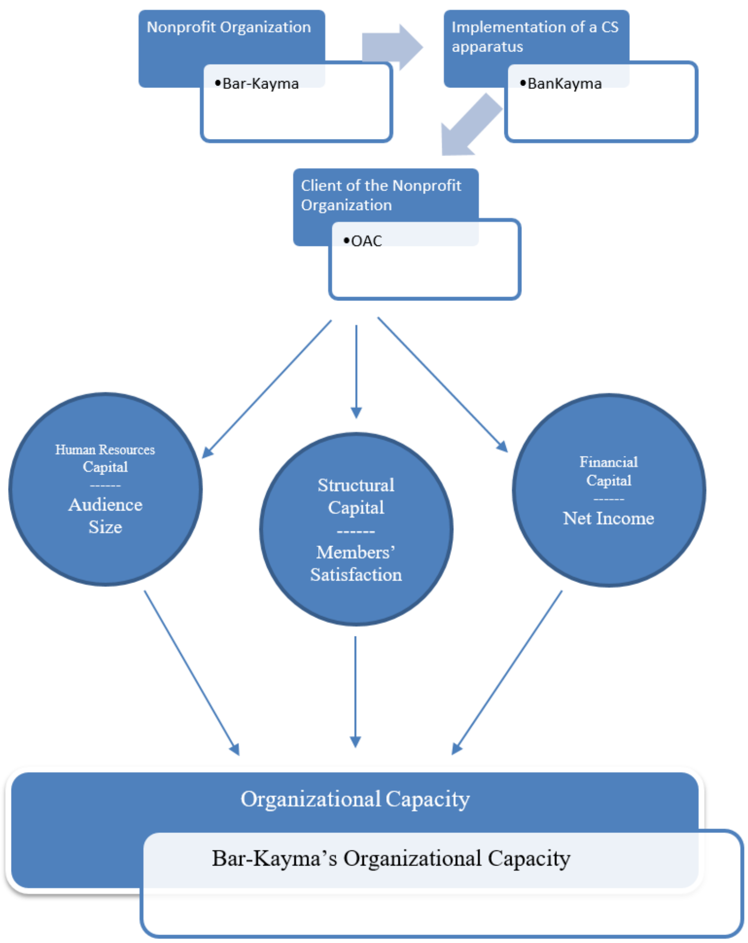
Brinkerhoff (2003) developed the Success Case Method (SCM) as a tool to evaluate the impact of a new intervention on for-profit organizations. The method is based on a case study approach which involves quantitative techniques for sampling outlier consumers and provides a qualitative analysis in the form of storytelling. Coryn, Schroter, & Hanssen (2009) modified Brinkerhoff's SCM to fit an environment of non-profit organizations and added a time-series component to this model.

The methodology of the dissertation followed the model suggested by Coryn, Schroter, & Hanssen (2009). Data were retrieved during nine periods of time, in the beginning of each month, from May 2016 to February 2017. Data on financial and human resources were retrieved from BK's organizational records and databases. BK allowed full access to historical records, which permitted employing time-series statistical tests, by adding the sixteen months that precede the intervention. Finally, data on OACs' satisfaction with BNK were retrieved from an analysis of surveys, interviews and questionnaires with participating OPMs. This also permitted a qualitative analysis, within the framework of the complementary mixed-methods approach.

The impact model presented in Figure 1 illustrates the directions in which the intervention (BNK, the CS apparatus) in the nonprofit organization (BK) affects its clients (the OACs), and in turn, the organization's capacity.

Figure 1

Illustration of the Conceptual Impact Model



Significance of the study

The importance of this dissertation stems from the increasing usage of crowdsourcing tools and the lack of relevant research on this mechanism for nonprofit organizations. Therefore, the research has the potential to contribute to future research by providing an empirical and theoretical model of CS apparatus implementation among nonprofit organizations. Further, the case study organization may benefit from the research by taking steps to increase its capacity following the completed evaluation.

In order to examine whether and how the adoption and implementation of crowdsourcing tools influence organizational capacity, a conceptual model is presented. Literature on CS and nonprofit organizations is reviewed to form a theoretical framework for the measurement of organizational capacity. This study offers a concise yet comprehensive definition of crowdsourcing: The outsourcing of an organizational function to a given online community. Consequently, a crowdsourcing organizational approach is conceptualized as the ability of an organization to examine each of its functions and to prefer crowdsourcing according to cost effectiveness feasibility. Literature on CS suggests that it “allows founders of for-profit, artistic, and cultural ventures to fund their efforts by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries” (Mollick, 2014, p.1). The study might enrich our understanding of the CS phenomenon and point to preferable directions for adoption of a CS apparatus among nonprofit organizations in order to increase their capacity.

Summary

This dissertation investigates how integrating a crowdsourcing apparatus within a nonprofit organization may impact its organizational capacity. As a case study, the research focused on Bar-Kayma (BK), a nonprofit organization, and evaluated the progress of BNK as a crowdsourcing apparatus initiative during nine months from its initiation in May 2016. A mixed-methods data collection and analysis were applied. The research was structured on a Quasi-Experimental Time-Series design, whereby BK's OACs comprised the unit of observation. The researcher theorized that implementation of a CS within a nonprofit apparatus leads to increases in the financial capital, the human resources capital and the structural capital, and in so doing, impacts the capacity of the organization. Through this case study the theory was evaluated.

The specific aspects of the study will be discussed in the chapters that follow. In chapter two, a review of the literature on the crowdsourcing phenomenon, theories of organizational behavior, social networks, and the case study approach are presented. In chapter three, rationale is laid for the research design, which explains the quantitative and qualitative techniques that were used for data collection and analysis. In chapter four I present relevant findings and analyses to answer the research question and the hypotheses, and relate them to the reviewed literature. In chapter five a summary of the research is presented, emphasizing its conclusions in the context of the theoretical framework, and potential contributions to the investigated case study, as well as recommendations for future research.

Chapter 2:

Literature Review

Crowdsourcing: Overview of the Phenomenon

The technique of outsourcing jobs to an undefined crowd through an open call has numerous historical evidence, for the most part within a contest with prizes for a defined invention (Morgan, 2008). Although crowdsourcing as a social phenomenon is not a recent one, only recently has it drawn the attention of scientific scholars. Its contemporary phase is seen through online social networks, which allow interdependent relationships among actors and create information pools that have the potential to be utilized by participant actors (individuals or organizations) in order to exchange resources. This is an informal mechanism of give-and-take, where learning processes occur, mutual trust is constructed, and collaboration is evident in practice.

The term crowdsourcing was coined initially by Jeff Howe in 2006 when he published an article and provided examples of the phenomenon (Howe, 2006). Two years later, he added a definition by which crowdsourcing is “the act of taking a job traditionally performed by a designated agent and outsourcing it to an undefined, generally large group of people in the form of an open call” (Howe, 2008, p. 1). According to Howe’s conceptualization, crowdsourcing is not a contemporary phenomenon. For instance, when the police issue a ‘wanted’ ad, it crowdsources the job of locating a person. However, only recently has it drawn attention from scientific scholars. In the decade since Howe initially coined the term, crowdsourcing gained increasing interest in the academic sphere. Research on the phenomenon is robust and characterized as interdisciplinary in nature. Hence, there is no consensual definition, as it varies across and within disciplines.

Brabham focused on crowdsourcing for his doctoral work and continues to contribute substantially to the body of knowledge in this field. He highlighted the significance of Howe’s observation and looked into how the phenomenon could be applied to “areas of social justice, democratic participation, and environmental activism” (Brabham, 2013, p. x). Brabham views crowdsourcing as an outsourcing of an organizational function to a given online community, where a balance must exist between the magnitudes of the organization and the online community.

In comparison to Howe’s definition, Brabham’s is relatively narrow and excludes numerous organizations, such as Wikipedia and Kickstarter. The former does not meet his criteria as the emphasis is on the crowd, whereas in the latter case the emphasis is on the organization (Brabham, 2013). Moreover, while Brabham accepts Howe’s notion by which crowdfunding shares similar properties with crowdsourcing, he argues that these are two separate phenomena, and therefore, crowdfunding should not be seen as a crowdsourcing derivative (Brabham, 2013). Nevertheless, other scholars, such as Estellés-Arolas & de-Guevara (2012), offer a broader definition in which: 1. There are two players - an organization on the one hand, and an online community that constitutes a given crowd on the other; 2. The crowd is designated to carry out tasks for the organization; and 3. There is a mutual benefit where the organization's tasks are completed and crowd members receive some kind of utility, such as satisfaction or material rewards.

Derived from Howe's initial definition, while crowdsourcing is not a contemporary phenomenon, only recently has it drawn attention from scientific scholars. However, while there is no agreement on a precise definition in academic literature, scholarly work seems to converge around the magnitude of the online element of crowdsourcing. In other words, the crowd is an online entity, and therefore crowdsourcing depends on an online realm, which at the time of the current discussion, is defined generally as the internet. If so, this study offers a concise yet comprehensive definition of crowdsourcing as an outsourcing of an organizational function to a given online community.

Brabham (2008) refers to ethical aspects that crowdsourcing poses, such as the possibility to pay a small amount for the work of many. In a similar vein to Weber's view of capitalism, for Brabham "being part of the crowd is far from exploitation. Instead, it is an opportunity for the crowd, as expressed by the Protestant self-help ethic, rearing its head in a bootstrap, capitalist, global economy. Crowdsourcing offers individuals in the crowd a chance at entrepreneurship, or at the very least an outlet for creative energy" (p. 84). He calls for research on "how members of the crowd feel about their role as a laborer" (p. 86). Wexler (2011) reviews the impact of crowdsourcing on sociology and explores how the wisdom of the crowd can be channeled to develop innovative solutions. He begins with a literature and historical review of the conceptualization of crowds in sociology. Initially, crowd was conceived as a generator of social problems and as an object which elites try to control.

A recent phase of crowd theory emerged, which was inspired by contemporary technological developments, such as the internet, that facilitated more effective mass collaboration. In this perspective, the crowd is grasped as wise and a generator of collective intelligence rather than of a social problem. Wexler concludes that research on crowdsourcing has a value "by those organizing and motivating virtual projects and/or communities" (Wexler, 2011, p. 16) and that it undermines a basic concept of economics and sociology, since one essence of the phenomenon is that it "merges the user or consumer of a good or service with its producer" (p. 16). By that, there is a shift from intellectual-capital to virtual-property. This has not only implications for scientific research, but also laws. Wexler predicts that "At present, the position taken by advocates, a rather rosy one, points towards a future in which the use of crowdsourcing will increasingly open commerce and public sector organizations to a new and democratic forum for valuable ideas and public participation" (p. 17).

Recent technological developments induce financially based innovations in a new direction, that is, not only from the side that seeks to purchase a certain product, but also from the side of those who develop it. A prominent manifestation of this can be found in *Crowdfunding*, a crowdsourcing based fundraising method whereby numerous individuals invest a small amount for the sake of completing a large project, in contrast to traditional methods that entail raising large amounts from a small group of investors (Belleflamme et al., 2014). This theme complies with Howe's conception that "crowd-funding flattens hierarchies, by directly connecting people with money to the people who need it. And crowdfunding shares crowdsourcing's generally democratic impulse" (Howe, 2008, p. 7). In the context of contemporary nonprofit organizations, which might not be able to offer a substantial financial reward, the main challenge lies in the ability to motivate crowd participation.

Organizational Capacity in the Nonprofit Context

While organizational capacity has divergent definitions in the literature (Baser & Morgan, 2008; Eisinger, 2002; Misener & Doherty, 2009), there is a common recognition of the central role of the organizational capability to fulfill its goals (Connolly & York, 2002). This capability is likely to be reflected in the organizational resources and managerial aptitudes (Horton et al., 2003).

Building on Hall et al. (2003), organizational capacity in the nonprofit context, depends on a mixture of three capitals: (a) Financial capital – the ability to maintain and improve the organization's economic base, (b) Human Resources Capital – the ability to maintain and expand the scope of active members, and (c) Structural Capital – the ability to maintain and improve relationships among an organization and its members. Accordingly, capacity is an organizational variable which intertwines with other organizational aspects (Misener & Doherty, 2009).

Poister (2008) builds on previous work (Harkreader, 2000; Henry & McMillan, 1993) and argues that:

> Ongoing performance measurement systems in which key indicators are observed repeatedly at regular intervals automatically accumulate time-series databases. These databases lend themselves very directly to interrupted time-series designs and multiple time-series research designs that are often appropriate for more analytical program evaluations. In addition, they also facilitate comparison group designs and other nonexperimental and quasiexperimental designs for evaluations. (P. 39)

Coryn, Schroter, & Hanssen, (2009) argued:

> The addition of the time-series design element was also intended to reduce some of the threats to internal validity inherent in most single-group designs by identifying and eliminating as many plausible, competing explanations for observed effects as possible. Therefore, we would also assert that another benefit of the modified SCM is that by increasing methodological rigor through the addition of design elements, causal inferences can be better supported when stronger cause probing designs (e.g., randomized experimental designs, regression discontinuity designs, interrupted time series designs) are not feasible (p. 85).

Organizational Behavior and Organizational Change

Studies on organizational behavior aim to help us understand how organizations can efficiently achieve their goals while considering normative values, such as leadership, managerial behavior and ethical behavior. Organizational behavior is a relatively recent discipline in social sciences that originated in the mid-twentieth century as a branch of economics. It is an applied discipline that focuses mainly on two areas related to organizations - the behavior of people within organizations, and the behavior of organizations in the context of their environments (Miner, 2006). Studies of organizational behavior typically distinguish between three levels of analysis (Locke & Latham, 2002): (1) The individual - which focuses on personal characteristics such as satisfaction, motivation, and notions, (2) The group - which focuses on collective characteristics such as teamwork, and diversity, and (3) The organization as a whole - which focuses on intentional characteristics such as goals, efficiency and environment. Additionally, research on organizational behavior has a multidisciplinary orientation, as it utilizes theoretical and conceptual frameworks from several disciplines, such as Sociology, Psychology, Anthropology and Political Science (Miner, 2003).

In the context of organizational behavior, the crowdsourcing approach poses ethical issues that stem generally from the rise of a new class (crowd members) which is not hired by organizations in a traditional manner. As such, the rights of such members are not anchored in laws that obligate the given organization. Examples of such issues are ownership of copyrights of crowd generated content, fair treatment and social rights. While literature exists on such issues among for-profit organizations, this dissertation makes a precedential attempt to formulate the phenomenon among nonprofit organizations.

Among the various definitions of organization in the literature, Selznick's distilled notion stands out and views an organization as a “structural expression of rational action” (Selznick, 1948, p. 25). As an applied discipline, organizational behavior provides a set of theories that are beneficial for this research which involved nine months of participation in BK’s organizational network. In this process, various research methods were utilized in the study of organizational behavior.

Miner (2003) explored 73 organizational behavior theories, which he classified in 5 categories: (1) General, (2) Motivation and perception, (3) Leadership, (4) System and organizationwide, and (5) Decision making. Through a survey issued to prominent scholars in the field, Miner measured each of these theories for their "relationship between estimated usefulness in application and estimated scientific validity" (Miner, 2003, p. 258). The goal-setting theory meets the criteria for supporting this study and was rated highly in Miner’s study.

The Goal-Setting Theory

Extensive classic and contemporary research on work motivation can be found in the literature (Maslow, 1943; Schmidt, Beck, & Gillespie, 2012). Latham & Pinder (2005) build on Pinder (1998) and define motivation in an organizational context as a set of operational factors that are originated internally and externally from a given individual in the organization, which in turn affect social behavior within the organization and determine its pattern, course, potency and continuity. Consequently, they argue that motivation is an interactive psychological phenomenon between individuals and their environment. There is agreement in the literature that Locke & Latham's (2002) goal-setting theory is one of the most dominant theories of motivation (Miner, 2005;

Myer, Becker, & Vandenberghe, 2004). It is a concise theory which was derived from analyses of a large amount of empirical data and thus was easily implemented in the field.

Organizational goals constitute the main component in theories of motivations (Schmidt et al., 2012). Goals are defined as “internal representations of desired states, where states are broadly construed as outcomes, events or processes” (Austin & Vancouver, 1996, p. 338). Mitchell & Daniels (2003) differentiate between goal-setting and goal-striving and claim that goal-setting received a relatively higher degree of consideration. The main statement made in goal-setting theory is that a setting of specific and non-trivial goals leads to high performance. In other words, there is a linear positive correlation between a goal’s difficulty and the efforts and performance demonstrated by those who attempt to accomplish it. One of the salient concepts of the theory refers to self-efficacy and states that when individuals set their own goals, “they are more committed to assigned goals, find and use better task strategies to attain the goals, and respond more positively to negative feedback” (Locke & Latham, 2002). Lawrence & Lorsch's (1967) finding of positive correlation between the complexity of a challenge that an organization faces and the efficiency of the organization’s response to that challenge, coincides with Locke and Latham’s finding of a positive correlation between the degree of the goal’s difficulty and the performance of the organization.

Locke & Latham argue that performance is influenced by goals through four mechanisms: (1) Focusing - when there is a goal, the individual has a direction, (2) Energizing - having a goal stimulates action, (3) Timing - setting a tight deadline increases productivity, and (4) Engagement - setting a goal increases arousal and use of knowledge. Following a meta-analysis study, Locke & Latham offer five procedures to enhance organizational goals: (1) Imparting it with importance - this can be achieved, for example by making a public commitment to it, (2) Providing leadership vision and support, (3) Linking the goal to a purpose or a rationale, (4) Initiating a complex assignment, and (5) Providing feedback on actual performances.

Another core element of the goal-setting theory refers to satisfaction. When a goal is achieved, it increases satisfaction and in turn, satisfaction yields increasing commitment and performance. Locke & Latham (2002) argue that organizational performance might be undermined as a result of potential conflicting interests between the goals of the organization and the individual goals of its members. They discuss potential limitations of their theory, such as its ability to explain subconscious motivations for actions, and call for further research in this direction.

Online Communities and Social Networks

Crowdsourcing relies on the existence of online communities, described by Faraj, Jarvenpaa, & Majchrzak (2011) as "a virtual organizational form in which knowledge collaboration can occur in unparalleled scale and scope, in ways not heretofore theorized" (p. 1224). These communities operate on the internet, which is characterized by its network structure, and the ability of their members to carry out tasks designated by specific organization brings forth the conditions that allow crowdsourcing (Roth, Brabham, & Lemoine, 2015).

Social networks allow interdependent relationships between actors and constitute an information pool which has the potential to be utilized by participant actors (individuals or organizations) in order to exchange resources. This is an informal mechanism of give-and-take, where learning processes occur, mutual trust is constructed, and collaboration is done in practice. Jones, Hesterly, & Borgatti (1997) presented an innovative theory and defined network governance as institutional dynamics based on an "informal social system" (p. 911), in contrast to the widespread view at the time that focused on formal bureaucracy. They stated that "social mechanisms in network governance reduce transaction costs, gaining comparative advantage over markets and hierarchies, which enables network governance to emerge and thrive" (p. 913). This observation is a key part of my argument for utilizing the theory. Their model describes how structural embeddedness happens among dyads (firms in the market). They theorized that structural embeddedness decreases uncertainty and transaction costs, spreads norms, and thus promotes collaboration within the network. Therefore, a network-based social structure allows its participants to overcome the well-known prisoner's dilemma, which is derived from a non-optimal performance of players due to competition, lack of trust and missing information.

Numerous studies that focused on nonprofit organizations from a network approach were previously conducted. For example, Milward & Provan (2000) conducted such research on health services across the US and argued that the more a network exhibits strength and centralization, the higher probability that it would perform efficiently. This argument is debatable in the literature, as other scholars claim that decentralization is a positive element (Berardo, 2009; Graddy & Chen, 2006).

The present study adopts Putnam's (2001) conceptualization of social capital as a "connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (p.19). Dale and Newman (2010) build on Borgatti and Foster (2003) and state that social capital "is one of the biggest growth areas in network research" (p.7). They further review the concept of social capital in the literature and demonstrate how social capital can be used and measured in a case study that focuses on a nonprofit organization, by the number of individuals who are members in the organization's social network. They reviewed a case study, which focused on "United We Can", a nonprofit organization from Vancouver, Canada. They show that "In this case study, social capital is treated as a by-product of organizations" (Dale and Newman, 2010, p.10). They follow with a citation from Jackman and Miller (1998): "Individuals join organizations or networks in response to incentives, and social capital is generated by their ensuing membership" (p.55).

Technological Adaptation

Tolbert & Hall (2015) viewed organizational spatial dispersion from a perspective of conflict resolution and showed a negative correlation between the size of an organization and its internal integration. According to this logic, BK can be expected to demonstrate a high level of integration and efficiency on the one hand, and a low level of complexity and controversy on the other. Moreover, due to BK's organizational structure, questions regarding hierarchy are obviated. Additionally, Tolbert & Hall (2015) argue that organizational size is positively correlated to its differentiation, and organizational structure has influence on its ability to implement new technological solutions. Therefore, as a result of the non-presence of a hierarchical structure and chain of command, it can be expected that BK would efficiently experiment and implement new technologies.

Levitt & March (1988) show that organizational performance improves as a result of gaining experience and learning through various ways such as experiments, routines and history dependency. They discuss the negative effects of superstitious learning and advocate gradual adaptation of the learning materials in order to address the phenomenon. Moreover, they refer to the principle of documentation, and conceptualize it as *organizational memory*. Weber (1946) delved into the concept of bureaucracy and distinguished between bureaucratic authority in public services and bureaucratic management in private spheres. He argued that the mechanism is made possible in a modern structure (capitalist organization or a developed state). Weber also discussed questions of power and authority in a society, which stems from hierarchical structure and position occupied by professionals.

The Case Study Approach

According to Yin (2003), a case study is a methodology that focuses on contemporary events, does not require a control of behavioral events and could utilize "any mix of quantitative and qualitative evidence" (p. 15). Thus, the method is suitable to understand complex social phenomena such as community planning and managerial processes (Yin, 2003). Building on Stake (2013) who views case study research as a salient qualitative method, I explored BK's network as a multi-case system over nine months. My data collection included numeric records and semi-structured interviews. Participants included representatives from each participating OAC, as well as BK's administrators and board members. Therefore, the study corresponds with Brabham's (2008) call for qualitative research through interviews with individual members of a given crowd, increasing our understanding of the conditions that make crowdsourcing initiatives succeed or fail.

Greenwood & Levin (2006) build on Lewin's (1948) distinction of three stages of social change process: (1) Breaking up existing structures, (2) Altering them, and ultimately (3) Assembling them into a modified structure. However, they argue that the third stage might not be applicable, as social changes constitute dynamic processes with no granted final phase. Greenwood & Levin continued to build further on Lewin's view of group dynamics, by which the researcher may act as a participant observer, though claiming that research participants bring their own capabilities and have the potential to influence the course of research. They argue that a theory shall be tested by its ability to explain social structures in addition to its ability to generate changes in certain directions.

Despite the considerable importance of group dynamics in Greenwood & Levin's approach, they do not offer a deep analysis of the issue. In this regard, it might be valuable to refer to Olson's (2009) endeavor to delve into the motivations behind collective action, and explore groups' behavior from an organizational angle. Inspired by an economist perception that groups have a purpose of providing goods, Olson theorizes that rational individuals will seek to minimize their cost of participation (in achieving a common interest) as the group in which they act grows.

Williamson (2000) for instance, focused on the evolution (formation and dynamics) of informal institutions and argues that future study should rely on tools from new institutional economics. Such study was conducted a decade later by Ostrom (2011) who explored the way the institutional analysis and development framework can assist researchers. This attempt aimed to illustrate how decisions are being made “within the constraints of a set of collective-choice rules” (Ostrom, 2011, p. 11) . Ostrom also builds on Olson and took his direction for analyzing groups by their size, the roles played by their members and their cost of participation. Thus, from the old functionalist paradigm of institutionalism to Olson’s organizational based approach, a core element of research considers the incentive/coercive factor as the engine of actions carried by individuals in a group.

For Greenwood & Levin (2006), social research is scientific if it contributes to existing preconceptions by investigating processes and making conclusions that can be interpreted and evaluated by interested parties. They lay a theoretical basis which is based on hermeneutics and logical positivism. Hermeneutics refers to an epistemological aspiration to interpret the world which is ontologically conceived as subjectively given. Logical positivism, on the other hand, refers to epistemological aspiration for yielding a definite “truth” based on an ontological view of the world as objectively given. They underline Gadamer et al.'s (2004) notion of hermeneutics as a form of acting rather than thinking, and thus places a value for participants' background of knowledge, interpretability and experience to the research process.

Summary

The present study contributes to the literature on organizational crowdsourcing approaches among nonprofit organizations. BK is a nonprofit organization that aims to assist and support various OACs in Jerusalem. By doing so, BK has effectively consolidated a network of nonprofit organizations. This network constitutes a systemic agency for all OACs, which are perceived as agents. Their congruence of actions and interactions construct the network's functionality. BK has developed a crowdsourcing apparatus as a means to achieve its objectives. Collaboration with online communities that constitute crowds enable OACs to adopt a crowdsourcing apparatus as a mechanism for solving problems, accomplishing tasks, and even planning future courses of action.

The goal-setting theory which was reviewed in this chapter is classified as a motivational theory. The theory explains performances as a derivative of motivation, which in turn is a derivative of setting non-trivial goals. Through the goal-setting theory, this study took notice of potential conditions for crowd participation that can be used for research on the CS phenomenon. Recent studies noted the absence of empirical data on CS among nonprofit organizations, and called for research in this direction in order to identify conditions to motivate crowd members (Roth et al., 2015). Thus, the study contributes to the structural knowledge as it yielded documentation on empirical experience of CS implementation by a nonprofit organization,

Chapter 3:

Methodology

Introduction

This chapter presents the research methods and design that were utilized to evaluate the influence of a CS apparatus on the organizational capacity in the nonprofit sector through the case of BK. Accordingly, the primary research question is whether BK improved its organizational capacity as a result of the implementation of a crowdsourcing apparatus.

Currently, the BK network encompasses 23 OACs and 20 OPMs. BK's board has expressed its consent for conducting the research, to include crowdsourcing in its organizational network, and to provide free and full access to its organizational information and data. BK extended invitations to all OACs, board members and employees to participate in the research via e-mail along with a consent form to confirm their participation.

Operational Definitions of the Research Hypotheses

My aim in this dissertation is to evaluate the impact of BNK on BK's organizational capacity, as a case study of a nonprofit organization that implemented a CS apparatus. In the previous chapter BK's organizational capacity was defined as a compound of three capitals: (a) Financial capital – the ability to maintain and improve the organization's economic base, (b) Human Resources Capital – the ability to maintain and expand the scope of active members, and (c) Structural Capital – the ability to maintain and improve relationships among an organization and its members. Subsequently, in order to evaluate BK's organizational capacity, three hypotheses were formulated with the intention to address each of the three capitals respectively. In this section, I present the research hypotheses and provide an operational definition for each, as well as its rationale.

Hypothesis 1: Financial Capital. Those months prior to the intervention will have lower financial capital than those months after the intervention. Accordingly, the null hypothesis is: there is no statistically significant difference between the financial capital in those months prior to the intervention and those months after the intervention.

As derived from BK's standard agreement with OPMs (provided in Appendix F), each OAC has an account in BK's network and all its finances are managed in that particular account. The OAC may use 93% of its income, while 7% remain in BK's account. This is the OAC's overhead to BK, and BK's income is comprised solely from the OACs' overheads. Therefore, BK's income is equal to 7% of the overall income of all OACs. Consequently, BK's income is fully correlated with the OACs' income mean. Therefore, BK's income is utilized as a variable that measures the organization's financial capital. Finally, the operational definition of hypothesis 1 is: BK's monthly income mean will increase after the implementation of BNK throughout the examined period.

Hypothesis 2: Human Resources Capital. Those months prior to the intervention will have lower human resources capital than those months after the intervention. Accordingly, the null hypothesis is: there is no statistically significant difference between the human resources capital in those months prior to the intervention and those months after the intervention.

Human Resources Capital was defined in the second chapter, as the ability to maintain and expand the scope of active members. Additionally, a review of network theories was provided in the second chapter, and the concept of social-capital, as the connections among organization's members, was introduced. Building on Dale and Newman's (2010) notion, social-capital can be evaluated by the number of individual members in BK's network. Those individuals are comprised by the audiences of all OACs and defined as BK's audience size. Consequently, BK's audience size is utilized as a variable that measures the organization's human resources capital. Finally, the operational definition of hypothesis 2 is: BK's audience size will increase after the implementation of BNK throughout the examined period.

Hypothesis 3: Structural Capital. Those months prior to the intervention will have lower structural capital than those months after the intervention. Accordingly, the null hypothesis is: there is no statistically significant difference between the structural capital in those months prior to the intervention and those months after the intervention.

Structural Capacity was defined in the second chapter as the ability to maintain and improve relationships among an organization and its members. In accordance with the goal setting theory, which was previously reviewed, that ability is delineated as the satisfaction of BK's members. Consequently, BK's members' satisfaction is utilized as a variable that measures the organization's structural capital. Finally, the operational definition of hypothesis 3 is: The satisfaction rate of BK's members will increase after the implementation of BNK throughout the examined period.

Research Design

The design of this study builds on Coryn, Schroter, & Hanssen's (2009) Modified Success Case Method (MSCM) that was developed to evaluate the impact of a given intervention on the capacity in a nonprofit context and to point out tendencies over a period of time. A Quasi-Experimental Interrupted Time Series design was implemented, whereby BK was used as a case study. A mixed-methods approach for data collection and analysis was applied. Attention was given to possible threats to internal and external validity, such as experimental mortality and effects of history. Data on measurable objectives, such as OACs' budgets and audience size were collected through information retrieval from BK's records and databases. Data on satisfaction and achievement of professional and organizational goals were collected through qualitative means, semi-structured interviews and questionnaires from participants. Through this design three variables were measured and analyzed: financial capital, human resources capital, and structural capital. Measuring these variables over time facilitated an analysis of the impact of BNK on BK's capacity. Attention was given to OACs that became associated with BK or that started or stopped using BNK during the course of the experiment.

The intention in choosing this design was to test the stated hypotheses using quantitative and qualitative data, and utilizes a deductive reasoning approach (Rubin & Babbie, 2016; Wilson, Julius, & Chaddha, 2010). Furthermore, since the study aims to evaluate a specific phenomenon (CS apparatus) within a case study framework, it did not control the variables and includes qualitative techniques such as semi-structured interviews. Thus, the design includes quantitative and qualitative measures and as such incorporates a mixed-methods approach.

Coryn, Schroter, & Hanssen (2009) stated that:

> The primary rationale for using SCM to assess the program's impact on program recipients was to plausibly eliminate rival hypotheses about core factors leading to sustainable success of service recipients and to do so in an efficient and cost-effective manner… Our modifications to the SCM were twofold and intended to serve multiple purposes. These included, but were not limited to, (a) defining success in a context which did not have an observable, measurable Return On Investment or impact on the service provider and (b) adding a longitudinal, timeseries design element to traditional SCM methodology to increase methodological rigor. (p. 83)

The Success Case Method (SCM) is used to "discover what is working and what is not with new changes and initiatives" (Brinkerhoff, 2003, p.14). It is an evaluation approach for new organizational programs, which analyzes extreme cases. The method was designed initially to evaluate changes in the for-profit context. It is a derivative of the case study approach, and relies on a storytelling form of analysis to produce results. Data is collected by communicating with participants who experience the new organizational programs through interviews, surveys and questionnaires. The results focus on identification of practices that work best and thus allow to increase the organization's knowledge base while providing models that can fit other organizations (Brinkerhoff, 2003).

Utilizing Coryn et al.'s (2009) MSCM design, this study incorporates a time series component to the SCM, which is more suitable for the nonprofit context, where ROI (Return On Investment) does not define the organizational goal. Among nonprofits, the MSCM is designed to allow three levels of evaluation: (1) stakeholders - these would be BK's executives and board members, (2) immediate impactees, which would consist of the OPMs, and (3) downstream impactees that are defined in this study as the OACs' audiences. Consequently, the method allows us to assess how successful new programs are by three objectives: (1) maintaining BK's financial balance over time, (2) services provided to the OACs, and (3) fulfillment of the OACs exposure to their potential audiences.

Therefore, the MSCM is in accordance with the theories reviewed in chapter two of this dissertation, by which organizational capacity in the nonprofit context can be evaluated by its financial, human resources, and structural capitals. Since those organizational elements are defined respectively by BK's income, the OACs' audience size, and the OPMs' satisfaction with BK, the method provides an existing framework for evaluating the influence of BNK on BK. Coryn et al. (2009) state that "Much like a quasi-experimental time-series design or interrupted time-series design, our variant of SCM allows control over some threats to internal validity, making a more compelling argument for using SCM as a reasonably rigorous, reliable, credible, and viable alternative for making some types of causal inferences" (p.88).

Subsequently, the research methodology consisted of the following steps that are typical in the SCM with the addition of time-series design of the MSCM (Coryn et al., 2009):

1. Planning. Focusing on the implementation of BNK as an intervention that aims to improve BK's organizational capacity
2. Creating an impact model. This step is used to "delineates how an intervention is assumed to produce its desired results" (Coryn et al., 2009, p.1). The impact model is illustrated in chapter 1 (Figure 1) and presented in the Intervention section later in this chapter. The model is tested through the research hypotheses.
3. Survey all program recipients to identify successful and unsuccessful cases. In this step, participants' responses to the Likert-like satisfaction scale in May 2016 (the month of the intervention, denoted as "pre") were compared to their responses in February 2017 (nine months following the intervention, denoted as "post"). Each of BNK's feature was surveyed in this step separately. Participants who indicated a larger audience size were treated as success cases (H for High), while participants who indicated a smaller audience size were treated as unsuccessful cases (L for low).

4. Interview a sample of successful and unsuccessful cases and document their stories. In this step, extreme cases (H and L) are presented and analyzed.
5. Communicate findings, conclusions, and recommendations. In this step, a summary of the extreme cases is reported in the form of storytelling.

The Multi-Case Organization: Bar-Kayma (BK)

"Bar-Kayma - for culture, art, music and peace in Jerusalem" is a registered association that was established in 2006. In Hebrew and Aramaic, "Bar-Kayma" means "sustainable". BK focuses on a subculture from the mainstream social framework, practicing artists. The association fosters a creative community and encourages utilization of technology, humor and communication, in order to form independent and innovative enterprises. Apart from linking and connecting artists, cultural institutions and the public, members of the organization are specialists in production, project management, event organization, building websites, graphic design, visual arts, music, dance and performing arts. The organization assists and accompanies groups of artists, professionals and specialists, and supports local and independent media. These Organized Artist Collectives (OACs) are comprised of groups of artists who have joined forces under a collective name. Each OAC has a unique outtake on what is art. They are all different in size, demographics, and mediums of expression. The proposed study examines OACs within the framework of BK as an overarching institution.

Currently (as of February 2017), BK's network includes twenty OPMs. Each OAC is represented through one of its members who signs a contract with BK. This is a standard contract (provided in Appendix F: BK's Membership Agreement with OPMs) which regulates the relationship between the OAC and BK. A list of BK's OACs is provided in Appendix A. An interactive presentation of BK's network is available online.[1] Whereas BK is an organization that constitutes a pivotal node in a network of organizations and its main goal is to enhance and support these organizations, its own size is small in terms of organizational structure. While dozens of influential figures comprise the association's board, and individual members of all networked organizations possess a formal membership in BK association, there are only two full-time employees, who hold the positions of CEO and administrative manager. In April 2015 BK received several offices in a building in the center of Jerusalem (27

[1] An interactive presentation of BK's network is available online: http://barkayma.org/halfviz/index-profiletestNK.php?pro=12#/a-new-hope

This presentation can be activated by placing the cursor on an organization or individual member (in the right column) and pressing Enter. On the main window, the chosen actor appears in the center. All nodes are selectable, and when put in motion, their connections and interactions "drag" other connected nodes. The network is by all means the same for all actors and the alternative options in the right window merely impact the initial nodes' positioning. The basic interface allows several preferences setting. Nodes currently represent organizations, members (individual humans), and specialties. In addition, an online presentation of BNK initial community is available at: http://barkayma.org/test/bub/profile.php?id=12

Hillel St), and in May 2017 BK's headquarters is planned to move to a new location (4 Aristobulos St).

BK provides all OACs services of management, consultation, accounting and everything else "within its capacity" (Appendix F, section 3). Each OAC is responsible for carrying out its projects. It has accountability and freedom of creation and it takes an obligation to be debt free (Appendix F, section 1). Additionally, the contract ensures that BK would not be liable for any claims against the OAC (Appendix F, section 14). As such, every OAC can be perceived as a project-node within BK's network, which has a project manager that functions as the contact person between BK and the OAC.

Participants and Setting

Participants in the research consisted of fifteen individuals who agreed to participate in the research and signed a consent form (provided in Appendix B). In the initial stage of the research, I approached BK's CEO who agreed to provide access to BK's financial data and to both backend and frontend of BNK's online features. Additionally, BK's CEO provided a list with the contact details of BK's board members, accountant, and all OPMs. In May 2016 that list included forty-six individuals. Consequently, I communicated with one of BK's board members, BK's accountant and all OPMs. Twenty-three individuals were invited to participate in the research: BK's CEO, one of BK's board members and twenty OPMs.

In May 2016, BK's network consisted of twenty-three OACs, including three BK self-initiated projects. Hence, there was a population of twenty OPMs at the time. Thirteen out of the twenty OPMs signed a consent form and agreed to participate in the research. However, one OPM was not responsive throughout the research and therefore, the participating sample included 65% of the population (fifteen out of twenty-three), and consisted of BK's CEO, BK's accountant, BK's board member, and twelve OPMs. Participants were asked to provide data at six time-points throughout the research: (a) An initial interview was conducted in May 2016 (completion rate was 93%); (b) Four monthly surveys were administered from July through October 2016 (completion rate was 33%); and (c) The final questionnaire was sent to participants in February 2017 (completion rate was 93%). Additionally, financial data on the thirteen OACs were retrieved from BNK's backend.

In May 2016, the researcher issued invitations and conducted semi-structured interviews with all participants to evaluate the current state of BK and each participating OAC. The interview protocol guide is provided in Appendix C. The variables of interest were measured by ongoing monitoring of BNK and gathered through four monthly surveys from July through October 2016. The monthly survey protocol guide is provided in Appendix D. At the final phase of the data collection, the researcher administered a semi-structured questionnaire to all participants over the internet, based on a protocol similar to the initial interview (pretest). The questionnaire protocol guide is provided in Appendix E.

The intervention: BanKayma (BNK)

In June 2015 BK began to develop a CS apparatus to achieve its goals. The apparatus was implemented in May 2016 under the name of BanKayma (BNK). This situation fits Lewin's Planned Approach to organizational change (Burnes, 2004; Lewin, 1947). BNK took the form of a social network that incorporates an organization (BK) and a crowd which consists of the OACs and their audiences. BK serves twenty-three OACs and intends to expand its network and provide services to an increasing number of OACs. Through BNK, BK sought to increase its capacity by improving its relationships with partners, enhancing its information systems, and inducing efficient and effective collaboration across its network. The eventual aim of BNK was to lay the basis of a sustainable and self-funded community of culture seekers in Jerusalem, and in so doing, to achieve BK's manifested organizational goals. Starting in May 2016, every OAC was required to participate in BNK at a cost of one shekel (Approximately 0.25 USD) a day. Once a month, half of the fund was awarded randomly to one of the projects. The goal was to increase and integrate circles of various audiences in Jerusalem.

Within BNK's online social network, every OAC has a designated project account and every individual who has access to the internet has the ability to create a user account. Every member of BNK has access to certain products and services that BK provides, and every OAC has additional access to an online toolbox to manage its financial matters and to communicate with its audience. The study examined the adaptation of BNK and evaluated how it influences the organizational capacity of BK and the member OACs.

In the initial stage, BNK features were mapped by the researcher and BK's CEO. These features are presented in Table 1, and include six components: (1), Bill (2) Drive, (3) Jerusalemite.org, (4) Mailing list, (5) BNK Raffle, and (6) Crowdfunding initiatives. The essence of these features is consistent with the definition of crowdsourcing which is utilized in this study: the outsourcing of an organizational function to a given online community. Thus, BNK makes a CS apparatus.

Table 1

The Components of BNK Crowdsourcing Apparatus

BNK's Feature	***CS Description***	***Target Users***	***Target Audience***
Drive	Collaborative Management - Budget and finances	BK's Executives	OPMs
Bill*	Handling payments to suppliers and paperwork	OPMs	Suppliers Customers
Crowdfunding initiatives	Receive payments for donations, tickets, sales, campaigns	OPMs	Audience
Jerusalemite.org (also known as MessyBoat)	Online index of events and locations	BK, OPMs, Audience	Audience
BanKayma Raffle	Giving Circle/subscribers	Audience	OPMs
Mailing list	Audience registration and feedback	OPMs	Audience

* Bill is further elaborated in the definition of terms section in the first chapter.

This study did not intend to conduct a program measurement of BNK but rather to evaluate BNK's impact on BK's financial capital, human resources capital, and structural capital. In other words, the study focused on the impact that BNK has on BK's organizational capacity rather than on the operational conditions of BNK. While the evaluation of BNK's impact on BK's organizational capacity may be tangential to a program measurement of BNK, an evaluation of operational conditions was beyond the scope of this study. Therefore, the study does not delve into aspects of BNK that do not directly impact BK's capacity, such as BNK's development and maintenance practices. It was assumed then, that BNK is an operational and functioning intervention.

The Role of the Researcher

The essence of this study is to understand how CS, as a phenomenon, influences a nonprofit organization and the individuals in the organization. Adopting a new managerial apparatus, which might be perceived as contemporary and advanced, can be viewed as an idea that derives actors in the system. This paradigm is implied by the goal-setting theory as well. As such, a constructivist stance was taken, and my interaction with participants, as well as my interpretation of their actions and responses, took notice of this epistemological cognition.

According to the constructivist approach, the reality is socially constructed and driven by social interactions and collective understanding of the reality. Therefore, players interlaced in a both normative and material construction. My course of action, as a researcher was motivated by my intention to explore and evaluate outcomes of utilizing CS tools.

Jon Elster claims that in order to explain social institutions and social change, it must be shown how they emerge as a result of actions and interactions of individuals (Elster, 1989). Accordingly, an explanation in social science, which is best conveyed through rational choice and formal theory, incorporates intentional reasoning on actions of individuals, alongside causality of their interactions. Max Weber conceptualized the intersubjective interpretations as *Verstehen*, a German word that has close meaning to ‘understanding’ in English (Weber, 1978). In constructivist research, the main endeavor is to realize the implications of the Verstehen (Adler, 1997). Every social perception has a predicate, which is the realized issue itself. This issue might be interpreted in various ways. In this case, it is how BK perceives itself and its actions. I argue that there is intentionality (Mohanty, 1985) in the foundation of BK’s actions. In other words, the actions of the organizations take place for a reason and are based on some background (belief, learning, history, etc.). This research reveals potential competitive environments in order to explain how members of BK’s network perceive themselves and the intentionality of the others.

In accordance with Lewin’s view of group dynamics (Lewin, 1948), I took a position of participant observer both in the field and through online moinitoring of BK’s network. While I brought my own capabilities, and had the potential to influence the course of research, I made a conscious effort not to take actions that would influence participants’ performances in the network. This approach fits Greenwood & Levin's (2006) view by which a theory shall be tested by its ability to explain social structures in addition to its ability to generate changes in certain directions. Thus, I communicated on an ongoing basis with BK’s CEO in order to collect data from organizational records. Additionally, the researcher approached the participants, conducted the initial interviews, and administered the monthly surveys and the final questionnaires.

I am from Jerusalem, and in February 2017 (the month in which data collection was completed), my age (37) was close to the mean of the participants’ ages (35). The native language of fourteen out of fifteen participants is Hebrew, similar to mine. Though I collected no data during the research that would allow an evaluation of the effect of the research on participants’ performance, BK’s CEO estimated that my communication with participants had no influence on their performance.

Data Collection and Analysis

Inspired by previous studies (Connolly & York, 2002; Coryn et al., 2009; Misener & Doherty, 2009), the research design incorporated a mixed-methods approach to data collection and analysis. During the research process, qualitative and quantitative methods were used simultaneously. Quantitative data were collected though retrieval of financial records from BK’s servers and through quantifying participants’ responses to interviews, surveys, and questionnaires. Quantitative techniques were used to test all hypotheses. Qualitative data, which included semi-structured interviews and questionnaires with participants, were used to conduct empirical phenomenology and narrative analyses of participants’ experiences. During the research period, data were collected in four stages:

1. BK’s records and field notes. Ongoing discussions with BK’s CEO to refine the research objectives and feasibility. This stage began in May 2015 and continued throughout the research period. Conversations with BK’s CEO through varying mediums (such as meetings, emails, on-line chats and phone calls) were recorded and stored as field-notes. This stage included data retrieval from BK’s records throughout the research period.
2. Initial interviews and field observations. In May 2016, I traveled to Jerusalem and monitored BK’s activity for 30 days. During this period, I visited BK’s offices for at least three hours every working day, shared the desk with BK's CEO, and took field notes. Additionally, I visited the participants in their locations of work and conducted in-person interviews with all but three OPMs who were not in Israel at that time. Interviews with these three participants were conducted through video calls (using Skype software) in June 2016. The interview protocol (provided in Appendix C) aimed at gathering information on participants’ experiences and expectations, as well as their evaluation of the organizational capacity in each aspect.
3. Monthly surveys. Four monthly surveys, from July 2016 to October 2016, were administered to participants through surveymonkey.com. The surveys aimed at gathering data on the change in participants’ satisfaction with their projects, the work with BK, and each of BNK’s features. In each survey participants were asked to rate the change in their satisfaction on a Likert-type scale of 1 to 5. The monthly survey protocol is provided in Appendix D.

4. Final questionnaires. In February 2017, a questionnaire was administered to all participants (using Google forms) and aimed at gathering corresponding data with the initial interview and understanding participants' experience with BNK nine months after its introduction. Participants were asked similar questions to those in the initial interview, along with two demographic questions (age and gender). The final questionnaire protocol is provided Appendix E.

In order to evaluate the influence of the intervention, the study builds on Coryn et al.'s (2009) Modified Success Case Method (MSCM). The method relies on a mixture of quantitative and qualitative techniques to conduct a time-series analysis and focus on outlier cases. Data were collected from BK's records and from participants' responses to interviews, periodic surveys, and questionnaires. Quantitative analyses were conducted using descriptive statistics, paired samples t-tests, and Interrupted Time Series (ITS) modeling. Qualitative analyses of extreme cases were made through a case study approach and the utilization of empirical phenomenology.

BNK's features are described in the previous section on the intervention. BNK's components were conceptualized as three categories, presented in Table 2: (1) financial management, (2) activity management, and (3) crowdfunding initiatives.

Table 2

BNK's Features, Categorized

Category / Feature	***Financial Management***	***Activity Management***	***Crowdfunding Initiatives***
1	Bill	Jerusalemite.org	BNK Raffle
2	Drive	Mailing list	Online payment platforms

Features included in the first category, Financial Management, were scrutinized in this study for testing Hypothesis 1 using quantitative techniques. Financial records of each OAC, and of BK as the overarching organization, are generated by the crowd (in this case the crowd consists of BK's executives and OPMs) and is stored in the cloud (Google.com). I was given free access to the data generated, as well as to the association's financial data from January 2015 to April 2016.

Features included in the second category, Activity Management, are stored on the cloud (BK's dedicated servers) and were scrutinized in this study for testing hypothesis 2 through a combination of quantitative and qualitative techniques. First, available quantitative data retrieved from Jerusalemite.org on the OACs' audience from May 2016 to January 2017 were analyzed. Second, participants were asked to estimate their OAC's audience size in May 2016 and in February 2017. Extreme cases were identified and using qualitative techniques, their experiences were analyzed.

The third category, Crowdfunding Initiatives, is utilized in combination with the other two categories, to test Hypothesis 3 by applying a mix of quantitative and qualitative techniques. To do so, participants were asked to rank on a scale of 1 to 5 their satisfaction with each of BNK's features in the initial interview (May 2016) and in the final questionnaire (February 2017). Additionally, respondents ranked, on a scale of 1 to 5, the change in their satisfaction each month from July 2016 to October 2016. In both the initial interview and final questionnaire, participants were presented with open-ended questions regarding their work with BK, their own OAC and their experience with BNK. Respondents' satisfaction scores were standardized and inputted into a dataset (using SPSS Ver. 23). Participants' responses to open questions were imported into Atlas.ti (Ver. 7) for qualitative analysis.

Including BK's three self-initiatives, there were twenty-three member OACs in BK's network during the research period. Thus, there was a population of twenty OPMs. Twelve out of the twenty OPMs participated in the study. Among the participating OPMs, one joined BK's network in 2016 and one substantially reduced its scope of activity in 2016. Data used for financial analysis include BKOC from all twenty-three members. This allowed a conduction of analysis that reflects the overall finances of all OACs (n=23), while individual analyses were conducted on thirteen OACs. Financial quantitative data include the following sources: (1) Full data on BK's fiscal state for January 2016 through January 2017, (2) BK's income for 2015 by month, (3) Monthly income and expenses for 2016 for thirteen OACs, and (4) Annual income and expenses for 2015 of thirteen OACs.

Quantitative measurements. BK is an overarching organization that provides various services to Organized Artists Collectives (OACs) in Jerusalem. A list of the participating OACs is provided in Appendix A. These OACs are members of BK's network, and operate legally as part of BK rather than separate organizations. Their fiscal resources (income and expenses) are transferred exclusively through BK. Each OAC has a Project Manager (OPM) who represents that OAC in the network. The OPMs sign a formal contract with BK that defines the relationship with the PM and the associate OAC. This is a standard contract (provided in Appendix F), and all OACs operate under a similar framework within BK's network. The contract determines that 7% of the OAC's income is allocated to BK. Therefore, BK's overhead charge is 7% of the income sum of all its member OACs, and used to measure the financial capacity of BK. Henceforth, BK's overhead charge is referred to as BK's income.

BK's expenses include only monthly salaries for three employees: the CEO, the administrative manager, and the accountant. Additionally, BK has three self-initiated projects that it treats like OACs in its network and therefore are included as OACs in this study. These initiatives are: The Preparatory Program, the Raffle, and Jerusalemite.org. Two of which (Raffle and Jerusalemite.org) are also treated as BNK's features. Participants in the Preparatory Program pay tuition fees, BNK Raffle is funded by supporters (open to the public) that pay 1 Shekel a day (approximately 10 USD/ month), and BK received grants from foundations to fund Jerusalemite.org.

Variables used. Two datasets were generated: (1) time-series data of BK's network, and (2) data related to each OAC. The former dataset was used for testing all three hypotheses: (H_{1}) through the ARIMA interrupted time-series statistical model, (H_{2}) through a correlation analysis of daily events on Jerusalemite.org, and (H_{3})

through a quantitative detection of outliers among participants' satisfaction with BK. Independent variables used in dataset 1 are presented in Table 3. Dependent variables used in dataset 1 are presented in Table 4. The latter dataset was used to generate descriptive statistics for gaining initial assessments on BK's income, audience size and members' satisfaction. In addition, the latter dataset was used to conduct paired samples t-tests for testing Hypotheses 2 and 3. Variables used in dataset 1 are presented in Table 5.

Data on each OPM's satisfaction with BNK's features were collected at six points in time. First, participants were interviewed in May 2016, the month that BNK was implemented in BK's network. During the interview, they were asked to rate on a scale of 1 to 5 their satisfaction with BNK's features. From July 2016 to October 2016 participants received an online survey and were asked to grade on a scale of 1 to 5 the change in their satisfaction with BNK's features. This phase lasted 4 months. Participants were approached by email. Those who did not complete the monthly survey were approached again within a week. Participants who did not complete the survey by the third week of each month, were contacted by me or by one of BK's employees. The response rate for the monthly survey was 60% in July, 40% in August, 40% in September, and 47% in October. Monthly means of participants' satisfaction rates with each component were entered into dataset 1. Lastly, I sent an online questionnaire to all participants in February 2017. Data on individual OPMs' (n=12) satisfaction were entered into dataset 2 using the variables presented in Table 5.

Table 3

Dataset 1, Time-Series: Predictors and Operationalization of the Variables

Predictor	***Type of Measurement***	***Operationalization of the Variables***
period	Ordinal	Sequence of months in the series of 25 observations. Jan15 = 1, Jan16 = 13, etc.
phase	Binary	Pre BNK = (0), Post BNK = (1)

Table 4

Dataset 1, time-series: Outcome variables and Operationalization

Outcome Variables	***Source***	***Operationalization of the Variables***
BK's income	BK's records.	25 observations of monthly (January 2015 – January 2017) values in New Israeli Shekels. (1USD = approximately 4 ILS).
Daily events	jerusalemit.org	Monthly mean of events indexed in BNK May 2016 – October 2016
S_Self	Monthly survey	Satisfaction with their own project.
s_BK	Monthly survey	Satisfaction with BK.
s_BNK	Monthly survey	Satisfaction with BNK.
s_Raffle	Monthly survey	Satisfaction with 'Raffle'.
s_Bill	Monthly survey	Satisfaction with 'Bill'.
s_CF	Monthly survey	Satisfaction with 'Crowdfunding initiatives'.
s_SN	Monthly survey	Satisfaction with 'BNK social network'.
s_JLM	Monthly survey	Satisfaction with 'Jerusalemite.org'.
s_ML	Monthly survey	Satisfaction with 'Mailing List'.

Note: The type of measurement of all variables is interval. Satisfaction variables reflect monthly means of participants' responses on Likert-type scale.

Table 5

Dataset 2, Individual Participating OACs: Variables and Operationalization

Variables	*Type*	*Source*	*Operationalization of the Variables*
OAC	Nominal	BK's records	Name of OAC
Gender	Nominal	Participants' responses in final questionnaire	OPM's gender
Age	Ratio	Participants' responses in final questionnaire	OPM's age in February 2017
Income pre	Interval	BK's records	Mean of the OAC's income for Jan15-Apr16, the months that preceded the intervention (BNK)
Income post	Interval	BK's records	Mean of the OAC's income for May16-Dec16, the months that followed the intervention (BNK)
Expenses pre	Interval	BK's records	Mean of the OAC's expenses for Jan15-Apr16, the months that preceded the intervention (BNK)
Expenses post	Interval	BK's records	Mean of the OAC's expenses for May16-Dec16, the months that followed the intervention (BNK)
Audience pre	Interval	Participants' responses in initial interview	Audience size in May 2106
Audience post	Interval	Participants' responses in final questionnaire	Audience size in February 2017
B_sat_pre	Ordinal	Participants' responses in initial interview	Satisfaction with BILL in May 2106
B_sat_post	Ordinal	Participants' responses in final questionnaire	Satisfaction with BILL in February 2017
N_sat_pre	Ordinal	Participants' responses in initial interview	Satisfaction with BNK's network in May 2106
N_sat_post	Ordinal	Participants' responses in final questionnaire	Satisfaction with BNK's network in February 2017
J_sat_pre	Ordinal	Participants' responses in initial interview	Satisfaction with JERUSALEMITE.ORG in May 2106
J_sat_post	Ordinal	Participants' responses in final questionnaire	Satisfaction with JERUSALEMITE.ORG in February 2017
M_sat_pre	Ordinal	Participants' responses in initial interview	Satisfaction with BNK's mailing list in May 2106
M_sat_post	Ordinal	Participants' responses in final questionnaire	Satisfaction with BNK's mailing list in February 2017
R_sat_pre	Ordinal	Participants' responses in initial interview	Satisfaction with RAFFLE in May 2106
R_sat_post	Ordinal	Participants' responses in final questionnaire	Satisfaction with RAFFLE in February 2017
C_sat_pre	Ordinal	Participants' responses in initial interview	Satisfaction with BNK's crowdfunding initia-tives in May 2106
C_sat_post	Ordinal	Participants' responses in final questionnaire	Satisfaction with BNK's crowdfunding initia-tives in February 2017

Interrupted Time Series Design: Schematic Illustration

A classical decomposition of the time-series technique was utilized:

FM1 … FM16   X   FM17 … FM25

FM1-16 –BK's income in each of the 16 months that preceded the intervention.

X –   The intervention: Implementing BNK as a CS apparatus into BK's organizational structure.

FM17-25 – BK's income in each of the 9 months that followed the intervention.

N=25

Statistical test

BNK's impact is assumed to be an autoregressive stochastic process. Hence, the analysis was conducted through the Box–Jenkins method of regression for Time Series Models. Various models may be used to analyze time-series data, when each has its own advantages and limitations, and typical objectives for its exploitation. Two types of models were considered for analyzing BNK's influence on BK's financial capacity: Autoregressive Integrated Moving Average (ARIMA), and Artificial Neural Networks (ANNs). ARIMA models rely on values of previous observations and error terms. These models are widely used in social sciences to analyze time-series data, and are considered more robust than others for examining effects in multivariate settings

(Adebiyi, Adewumi, & Ayo, 2014). ANNs models are typically used to analyze nonlinear data with the aim of producing statistical inferences. Kovalerchuk and Vityaev (2000) show that ARIMA models are more suitable when forecasting is not the ultimate objective. The forecasting element in this study was merely used to evaluate the robustness of the model. For these reasons, the ARIMA model was employed to analyze BK's financial data and to evaluate BNK's influence.

For testing hypotheses 2 and 3, BK's audience size and participants' satisfaction rate were examined through a mixture of quantitative and qualitative methods. Data on audience size have emerged from two sources: (a) daily events published on jerusalemite.org, and (b) participants' estimation in the initial interview (May 2016) and final questionnaire (February 2017). The quantitative analysis of the data was conducted through descriptive statistics, and a paired samples t-test. Data on participants' satisfaction were gathered from the final interview, the monthly surveys and the final questionnaire. These data were used for generating descriptive statistics and conducting a paired samples t-test. SPSS software was used to conduct all statistical tests.

Qualitative Gathering. Evaluation of the OACs goal achievement perception was based on participants' responses in the initial interview, the monthly surveys, and the final questionnaires. The initial interviews and final questionnaires included open-ended questions on the OACs history and goals, as well as the relationship and expectations with BK and BNK. In the monthly surveys, participants were asked to rate on a scale of 1 to 5 the change in their satisfaction with the progress of their projects and with BNK's features.

Empirical phenomenology guided the data collection (Kleiman, 2004). I learned about BK by experiencing first-hand how the program works, rather than studying about the intervention from program materials and media. Aspers (2004) argued that in order to understand social phenomenon through phenomenology, it is imperative to rely on explanations from participants' experiences, and produce inferences. Accordingly, questions in the interview and questionnaire were designed to understand the influence of BNK on the participants' working experiences with BK.

Qualitative techniques were used to explore participants' experiences through two epistemological stances incorporated within the empirical phenomenology approach as a framework: (1) thematic analysis, where transcribed interviews and questionnaires were coded into themes, and (2) narrative analysis, where selected participants were analyzed in-depth to investigate their overall experience and construct contexts. Thematic analyses were conducted to reveal participants' experience regarding their audience size (Hypothesis 2) and satisfaction with BK (Hypothesis 3). Narrative analysis was carried out to allow in-depth query of participants who experienced extreme changes in their audience size (Hypothesis 2).

Narrative analysis is conducted through many perspectives in social sciences (Chase, 2005; Daiute & Lightfoot, 2004) and focuses on stories told by individuals (Polkinghorne, 1995). Czarniawska (2004) argued that narrative analysis can be usful for understanding organizations through stories told by individuals. Narrative analysis is appropriate for investigating the experiences of a small number of individuals

(Connelly & Clandinin, 1990) in order to form contexts (Ollerenshaw & Creswell, 2002).

While narrative analysis revolves mainly around the individuals, phenomenological analysis is typically used to investigate the experience of groups regarding specific phenomena, and considers common focal points (Van Manen, 2016). The phenomenological approach taken in this study is hermeneutic in its nature, as it involves reflections on prominent themes, descriptions of these themes, and balanced reporting of the stories (Van Manen, 2016). While approaching the data with no superstitions, I interpreted unintended meanings, and thus the analysis is not transcendental in nature (Moustakas, 1994). A phenomenological approach requires participants to explain what they have experienced, and how the relevant phenomena influenced them or was influenced by them (Moustakas, 1994). Therefore, the initial interviews and final questionnaires included questions that aimed at addressing these requirements.

The initial interview (Appendix C) was conducted in May 2016, the month which BNK was implemented within BK's network. The aim of the interview was to evaluate the participants' satisfaction with BK and their expectations of BNK. Participants were asked about the history and goals of their projects, their relationship with BK, their expectations regarding BNK, their then-current state of human resources, and their estimation of their audience size. Additionally, they were asked to rank on a scale of 1 to 5 their initial satisfaction (less than one-month at that time) with BNK's features. All interviews were audio-recorded. One OPM was not interviewed, thus the completion rate was 93% (fourteen out of fifteen participants).

In the monthly survey (Appendix D), participants were asked to rank on a scale of 1 to 5 their satisfaction with the progress of their own projects, the work with BK, the influence of BNK on their projects, and the change in their satisfaction with the six features of BNK.

The final questionnaire (Appendix E) was conducted in February 2017, nine months after the implementation of BNK within BK's network. The aim of the final questionnaire was to evaluate the participants' experience of working with the crowdsourcing apparatus. Participants were asked about the progress of their projects, their familiarity with BNK, their expectations for BNK, the size of their audience, and the influence of BK and BNK on their projects. Additionally, participants were asked to rank on a scale of 1 to 5 their satisfaction with BNK's features. BK's CEO and one OPM were interviewed by the researcher, and BK's accountant was not responsive. All other participants (n=12) completed the questionnaire online. Hence, the completion rate was 93% (fourteen out of fifteen participants).

Themes and coding. The aim of the analysis was to discover the effect of BNK on OACs' audience size and participants' satisfaction with BK. Interpretive methodology of descriptive phenomenological inquiry was employed with the aim of revealing the change in audiences' size. This strategy was chosen for addressing both the theoretical and the empirical facets of the research question. The empirical facet is the participants' experience of working with BK following the BNK implementation. The theoretical facet focuses on the effect of BNK as a CS apparatus on BK's organizational structure. The empirical facet is described using the analysis of the collected data, with the intention to provide supporting evidence for the theoretical facet.

Interviews were translated from Hebrew (with the exception of one participant, who preferred to be interviewed in English) and transcribed. Transcribed data from the initial interviews and final questionnaires were entered into separate spreadsheets in MS excel and imported to Atlas.ti. I coded the data based on the research questions and hypotheses, through categorization of motivation, expectation, and experiences. Themes and codes are presented in chapter four (Table 12 and Table 13). The codes were checked by BK's CEO in order to verify credibility and examination of interpretations' accuracy. All surveys collected OPMs' names and their associated OACs. In addition, the final questionnaire collected each OPM's age and gender. The analysis of the collected qualitative data followed six of the steps suggested by Hycner (1985):

1. Transcription. The first interview (Appendix C) was conducted in May 2016 in person with ten participants, through a phone call with one, and through an online video call with three participants. All interviews were audio recorded and transcribed. In the final stage of the research, I contacted all participants in February 2017 by phone and asked them to complete an online questionnaire (provided in Appendix D). Additionally, I interviewed two participants by phone using the same questionnaire guide. The transcriptions were translated from Hebrew to English and reviewed by a colleague for accuracy verification. During transcription, details that could identify a participant were overridden with matching par-

ticipant’s ID or titles. For example, when participants referred to BK’s administrative manager by her name, her name in the transcription was replaced with [BK’s administrative manager].

2. Phenomenological reduction. The collected data from the initial interview and final questionnaires were inputted into two separate datasets using Atlas.ti qualitative analysis software (Ver.7). I approached the data with no presuppositions in order to identify emerging meanings and to frame the data into contextual themes, using “families” feature of Atlas.ti (Ver. 7).
3. Reviewing the entire data. This stage was performed in order to confirm the contextual categories through iteration, allowing for any correction of data that was initially miscategorized.
4. Units delineation. This stage included coding the entire data.
5. Identification of relevant units for the study. This phase was necessary for data reduction and concertation. The identification was conducted through coloring (Atlas.ti feature). Units that were relevant for addressing Hypothesis 2 were coded in green, units for Hypothesis 3 –were coded in blue, and units relevant for both Hypotheses 2 and 3 were coded– in red.
6. Merging and eliminating units. In this stage, different codes with similar meanings were merged into one code.

Ethics

The Human Subjects Research Committee at Binghamton University approved this research. Participants signed a consent form (provided in Appendix B). Throughout data collection phases of the research, the researcher provided a monthly file with the collected data to BK. According to Poister (2008) feedback to employees on their performance is a central element of effective approaches to performance management, and this feedback is frequently provided by performance measures.

Limitations

The modified SCM, which was developed by Coryn et al. (2009), does not provide a sufficient basis to refute alternative explanations for the intervention's effect in a single-group setting. In order to address threats to internal validity, supportive techniques were utilized, such as the Interrupted Time Series (ITS) statistical modeling. In the given setting, maturation may pose a serious threat to internal validity, as change in capacity that would occur in the absence of BNK might be attributed to BNK. This can be addressed "by adding additional multiple posttest observations to the design" (p. 89). Coryn et al. (2009) argue that instrumentation does not pose a considerable threat. In the fourth chapter I provide a discussion on possible threats to validity, the means by which they were addressed in the analysis, and the applicable transference of the findings.

Conclusion

In this chapter I presented the Modified Success Case Method (MSCM), which provides a methodological framework, and the quantitative and qualitative techniques that were used to collect and analyze data. Following Coryn, Schroter, & Hanssen's (2009) MSCM, this study combines a mix of quantitative and qualitative techniques to evaluate how BNK, as a newly implemented CS apparatus, affects the organizational capacity of BK, a nonprofit organization. The method uses time-series data, and a qualitative analysis of quantitatively detected outlier cases. Subsequently, the quantitative approach included descriptive statistics and an interrupted time-series analysis. The qualitative approach relied on empirical phenomenology, and revolved around the inference of participants' experience with the new CS apparatus. In the next chapter I present the research findings, which might be beneficial to the case study, as well as for other nonprofit organizations that consider implementing CS apparatus in their organizational structure.

The intervention is BNK - the newly implemented CS apparatus. It is utilized as a nominal and manipulable binary independent variable. Organizational capacity is conceptualized as a composition of the OACs' financial, human resources, and structural capitals. These elements were utilized as the dependent variables. Each dependent variable was analyzed separately using the SPSS and R statistical packages. Time-series data on financial and audience size capitals were collected from BK's records and measured over time. Data on audience size and members' satisfaction were collected through interviews, monthly surveys and questionnaires with participants to measure their self-evaluation of goal achievement and satisfaction with BNK.

Chapter 4:

Results and Discussion

Introduction

In the previous chapter I presented the Modified Success Case Method (MSCM), which provides a methodological framework, and the mixture of quantitative and qualitative techniques that were used to collect and analyze data. In this chapter I review the research findings in the context of the literature. The chapter begins with a presentation of the conceptual and the testable operational definitions of the research question and hypotheses. Secondly, a description of the sample, through descriptive statistics that stemmed from the analyses, is provided. Thirdly, each hypothesis is analyzed in a separate section that includes a review of the findings and of the utilized investigation techniques, as well as a discussion in the context of the literature. The chapter ends with a summary of the results and conclusions.

Research Question and Hypotheses

This study aims to evaluate the impact of a crowdsourcing apparatus implementation on the organizational capacity in the nonprofit context. Bar-Kayma (BK) was used as a case study of a nonprofit organization that began using a crowdsourcing apparatus, BanKayma (BNK), in May 2016. Considering this intervention, the primary research question of this study was: Can BK improve its organizational capacity through the implementation of BNK?

BNK is an intervention and BK's organizational capacity is the outcome of interest. In the previous chapters, organizational capacity in the nonprofit context was defined as a combination of three capitals: Financial, human resources, and structural. Building on the reviewed literature in chapter 2, these three capitals were respectively interpreted in chapter 3 as BK's income, BK's audience size, and BK's members' satisfaction. Accordingly, a conceptual framework for the study was formulated, an impact model was defined, and three hypotheses were established to generate the research design.

The conceptual definition of Hypothesis 1 was: Those months prior to the intervention will have lower financial capital than those months after the intervention. The corresponding testable operational definition of hypothesis 1 was: BK's monthly income mean will increase after the implementation of BNK throughout the examined period.

The conceptual definition of Hypothesis 2 was: Those months prior to the intervention will have lower human resources capital than those months after the intervention. The corresponding testable operational definition of hypothesis 2 was: BK's audience size will increase after the implementation of BNK throughout the examined period.

The conceptual definition of Hypothesis 3 was: Those months prior to the intervention will have lower structural capital than those months after the intervention. The corresponding testable operational definition of hypothesis 3 was: The satisfaction rate of BK's members will increase after the implementation of BNK throughout the examined period.

The following sections present a description of the sample and elucidate the findings related to each operational definition: BK's income, BK's audience size, and BK's members' satisfaction. As explained in Chapter three, various techniques of data collection were used. Quantitative data were gathered from BK's records and from quantifiable participants' scores on Likert-type rating scales. Qualitative data were compiled from participants' responses to the initial interview and final questionnaire, as well as through the researcher's field-notes.

Description of the Sample

Including BK's three self-initiatives, there were twenty-three member OACs in BK's network during the research period. Thus, there was a population of twenty OPMs. Thirteen out of the twenty OPMs agreed to participate in the study. One of the thirteen OPM was not responsive, thus while quantitative data on her OAC's finances were retrieved through BK's records, qualitative data were not available. BK's CEO participated in the research and provided quantitative and qualitative data. BK's accountant and one of BK's board members participated in the research and provided data relevant for qualitative analysis. Therefore, quantitative data were available about BK and its thirteen OACs, and qualitative data were available from fifteen participants.

BK's income. Data used for financial analyses include BK's income from all twenty-three members. This allowed the analysis conducted to reflect the overall finances of all OACs (n=23), while individual analyses were conducted on thirteen OACs. Financial data were retrieved from the following sources: (1) BK's fiscal state for January 2016 through January 2017, (2) BK's monthly income for January 2016 through January 2017, (3) Monthly income and expenses for 2016 of thirteen OACs, and (4) Annual income and expenses for 2015 of thirteen OACs.

As derived from BK's standard agreement with OPMs (provided in Appendix F) and elaborated in the previous chapter, each OAC has an account in BK's network and all its finances are managed in that particular account. The OAC may use 93% of its income, while 7% remain in BK's account. This is the OAC's overhead to BK, and BK's income is comprised solely from the OACs' overheads. Therefore, BK's income is equal to 7% of the overall income of all OACs. Consequently, BK's income is fully correlated with the OACs' income mean . Monthly values of BK's income and expenses, from January 2015 to January 2017, were collected from BK's servers. BK's income and expenses for the examined period are illustrated in Figure 2 and reported in Table 6.

Figure 2

BK's Income and Expenses, January 2015-January 2017

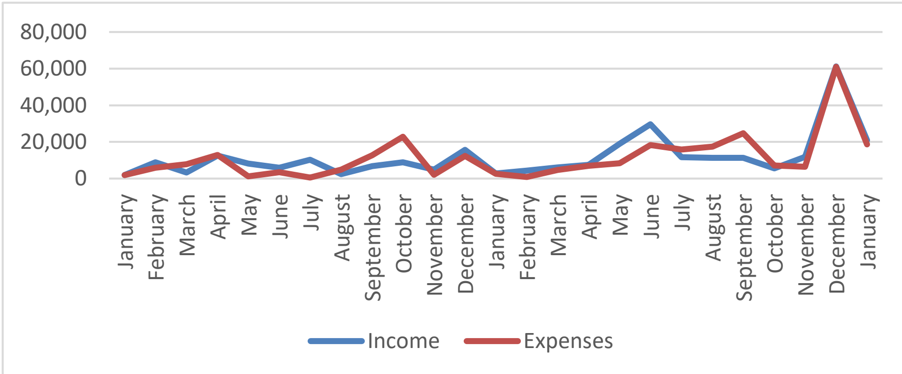


Table 6

BK's Income and Expenses

Period	***Month***	***Income***	***Expenses***
1	Jan-15	1,950	1,950
2	Feb-15	8,895	6,000
3	Mar-15	3,271	7,907
4	Apr-15	12,574	12,936
5	May-15	8,117	1,266
6	Jun-15	5,835	3,552
7	Jul-15	10,233	554
8	Aug-15	2,443	4,798
9	Sep-15	6,765	12,758
10	Oct-15	8,871	22,762
11	Nov-15	4,825	2,018
12	Dec-15	15,705	12,426
13	Jan-16	2,855	2,601
14	Feb-16	4,265	836
15	Mar-16	6,160	4,746
16	Apr-16	7,548	7,018
17[a]	May-16	18,955	8,411
18	Jun-16	29,591	18,356
19	Jul-16	11,648	15,852
20	Aug-16	11,312	17,353
21	Sep-16	11,404	24,669
22	Oct-16	5,586	7,091
23	Nov-16	11,919	6,488
24	Dec-16	61,210	61,010
25	Jan-17	20,962	18,700

Note. Values in Israeli Shekels. 1 ILS = approximally 4 USD.
a. The month in which BNK was introduced.

BK's expenses consist of the salaries paid to three employees in the association: CEO, Administrative manager, and an accountant. The accountant has a fixed monthly salary, while the CEO and the administrative manager are paid according to the surplus in BK's bank account. However, as shown in Table 7, BK's income mean (11,715 ILS = approximately 3,197 USD) appears to be slightly larger than BK's expenses (11,282 ILS = approximately 3,078 USD).

Table 7

Descriptive Statistics of BK's Income and Expenses, Jan15 through Jan17

Value	***Income***	***BK's Expenses***
N - Valid	25	25
N - Missing	0	0
Mean	11715.96	11282.32
Median	8871	7091
Std. Deviation	12135.2463	12544.05904
Range	59260	60456
Minimum	1950	554
Maximum	61210	61010

Since BK's expenses are a function of BK's income, the analysis focused on BK's income as a dependent variable, which depicts BK's financial capacity. Furthermore, for the purpose of this analysis, BK's income is equivalent to the OACs' income mean, as the values of those variables are fully correlated. Moreover, since data on BK's income are available from January 2015 through January 2017 for all OACs, while data for individual OACs' income is available only for 2016, and since only thirteen OACs' can be used for individual analysis, data on BK's income were preferable.

Audience size. Two types of data on audience size were collected: (a) Participants' estimation and (b) Daily events within BK's network. In regard to the former, in May 2016 (the month of BNK's implementation) and in February 2017 (nine month following the intervention) participants were asked to estimate their OAC's audience size. In regard to the latter, numerical values of daily events that are associated with BK's network were retrieved from jerusalemite.org for each day throughout the research quasi-experimental period (May 2016-Ferbuary 2017).

Participants' estimation. Participants were asked to estimate their OAC's audience size in May 2016 and again in February 2017. Since each OAC operates in different mediums, the question on audience's size took an open-ended form to allow interpretation of unintended links during the qualitative analysis. However, during the process of data preparation, I quantified participants' responses. These responses were inputted into a dataset of which OACs comprised the unit of analysis. As shown in Table 8, the values of the mean, the median and the mode of participants' estimation for post-BNK were larger than those values for pre-BNK.

Table 8

Participants' Self-Estimation of Audience Size, Descriptive Statistics

Value	*OACs' Audience Size Pre-BNK*	*OACs' Audience Size Post-BNK*
N - Valid	12.00	12.00
Mean	8406.25	10866.67
Median	1250.00	2000.00
Mode	800.00[a]	1000.00[a]

a. Multiple modes exist. The smallest value is shown

Daily Events. Quantitative data on daily events from May 2016 through January 2017, which are associated with BK's social network, were collected from Jerusalemite.org, one of BNK's features. Jerusalemite.org, also known as MessyBoat, is utilized as a web platform for coordinating and publishing events within BK's network. Since BK's OACs typically refrain from selling tickets for their events, analyzing the number of events may suggest whether the volume of activity changed over time and in what direction. Data collected on events from Jerusalemite.org are presented in Table 9.

Table 9

Daily Events in Jerusalemite.org from May 2016 through January 2017

Month Day	*May 16*	*Jun 16*	*Jul 16*	*Aug 16*	*Sep 16*	*Oct 16*	*Nov 16*	*Dec 16*	*Jan 17*
1	1	8	6	8	12	5	9	16	5
2	0	8	5	9	11	H	8	9	2
3	3	6	1	7	7	H	14	5	9
4	0	8	1	10	4	H	3	9	13
5	3	9	1	8	7	7	5	14	18
6	4	6	5	5	7	11	7	11	7
7	3	8	6	2	10	5	8	12	8
8	2	7	6	4	12	11	9	27	4
9	1	6	6	3	8	3	5	5	3
10	0	2	5	5	12	6	18	11	13
11	5	1	7	7	5	H	9	7	12
12	2	2	8	8	6	H	6	11	12
13	2	6	9	H	13	10	5	11	8
14	5	7	14	4	11	5	14	12	7
15	2	0	8	8	17	7	10	26	6
16	2	6	8	6	5	H	11	12	8
17	3	0	10	10	8	H	15	11	12
18	2	1	10	11	5	6	8	9	12
19	7	1	9	7	8	6	11	14	15
20	4	1	13	7	13	15	4	17	6
21	4	0	12	6	19	9	9	15	8
22	5	1	6	9	22	8	14	30	8
23	7	2	7	8	12	H	10	13	10
24	10	1	6	9	7	3	16	18	10
25	6	1	12	12	5	4	5	12	14
26	8	1	9	9	14	7	11	12	21
27	4	1	9	6	8	7	8	12	7
28	4	2	15	2	5	6	9	14	9
29	3	1	7	7	15	6	7	19	3
30	3	5	6	6	7	4	17	5	10
31	5		3	12		9		14	12
Average	3.55	3.60	7.42	7.17	9.83	6.96	9.50	13.32	9.42

Note. Daily mean for the entire period (9 months) = 7.862911
H = Holiday

Participants' Satisfaction. Quantitative analysis of participants' satisfaction was made on data collected from participants' responses to close-ended questions to rate on a Likert-type scale their satisfaction with each of BNK's features at six time-points: the initial interview, four monthly surveys, and the final questionnaire. In the initial interview (May 2016) and final questionnaire (February 2017), participants were asked to rate their satisfaction with each of BNK's features on a five-point scale, from strongly unsatisfied to strongly satisfied. During the initial interview, several participants did not provide their score on some of BNK's tools, typically explaining that they were not familiar with a particular feature, and thus prefer not to rank these tools. Additionally, Participant 15 was not interviewed in May 2016 and therefore data on pre BNK satisfaction is missing for that observation.

Participants were asked to rate on a scale from 1 to 5 the change in their satisfaction with BNK's components once a month from July through October 2016. Participants were instructed to indicate 1 for a very negative change, 3 to indicate no change, and 5 to indicate a very positive change. The monthly survey protocol is presented in Appendix D. Additionally, in the monthly surveys participants were asked to rate their satisfaction with the progress of their own project and their overall work with BK. The monthly surveys were not designed to evaluate participants' satisfaction per-se, but rather to assess trends in their satisfaction.

From a sample of fifteen participants, which included BK's CEO, BK's board member, BK's accountant and twelve OPMs, only five participants, of whom four are OPMs, responded to all four surveys. Five other participants responded sporadically, and five participants did not respond to any of the four monthly surveys. Therefore, the complete participation rate is 33% (5/15). Weighted satisfaction rates with BNK's Features are presented in Table 10 for pre and post intervention. Mean values of participants' responses to the monthly surveys regarding their satisfaction with the various aspects, are presented in Table 11.

Table 10

Weighted Satisfaction Rates with BNK's Features, Pre-Post BNK

BNK's Feature	*Responses (N)*	*Very Satisfied %*	*Satisfied %*	*Neutral %*	*Unsatisfied %*	*Very unsatisfied %*
Bill Pre	11	64	27	9	0	0
Bill post	12	100	0	0	0	0
Ntwk Pre	10	60	0	20	20	0
Ntwk post	10	40	0	60	0	0
Jlm Pre	11	55	9	36	0	0
Jlm post	12	25	25	50	0	0
Mlist Pre	8	50	25	13	0	13
Mlist post	10	20	10	50	0	20
Raffle Pre	11	45	9	27	18	0
Raffle post	12	50	0	33	17	0
CF Pre	8	63	0	25	13	0
CF post	10	10	0	50	20	20

Table 11

Participants Satisfaction, Mean Values

	n	*Self*	*BK*	*BNK*	*Netwk*	*Bill*	*CF*	*Raffle*	*Jerusalemite*	*Mlist*
July	9	3.78	3.56	3.38	3.22	3.56	3.00	3.00	3.22	2.89
August	6	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.40	3.29
September	6	3.33	3.00	2.83	3.00	3.17	3.00	2.83	3.17	3.17
October	7	3.57	3.29	3.29	3.00	3.14	3.14	3.00	3.14	2.857
Overall Mean		3.55	3.21	3.12	3.06	3.22	3.04	2.96	3.23	3.05

Qualitative Analyses: Themes and Coding

The quasi-experimental time-series research design presents several drawbacks, as it lacks controls, which in turn reduces its ability to establish causal relations and produce generalizable results. In order to address these concerns of internal and external threats to the research validity, qualitative methods were applied. In chapter 2, literature on the case study and the empirical phenomenology approaches were reviewed. In chapter 3 the techniques by which these approaches were applied were specified. In this section, the themes and coding that stemmed from the qualitative analyses are presented. Later in this chapter, the qualitative analyses that were conducted to complement quantitative findings related to Hypotheses 2 and 3, are presented. Through these analyses generalizable inferences were made, which are reported in the last section of this chapter.

Qualitative techniques complemented quantitative testing of hypotheses 2 and 3 in this study, which evaluate the impact of BNK on BK's audience size and members' satisfaction. Participants' responses to open-ended questions in the initial interview and final questionnaire were analyzed, and quotations related to audience size were extracted.

Findings were used to conduct a cross-analysis with quantitative findings on audience size to detect extreme cases of OACs that experienced the highest and lowest variation in audience size. Those extreme cases were further qualitatively analyzed through a presentation of participants' experience in a form of a storytelling, and interpretations were made thereupon. In accordance with the research design, qualitative techniques were utilized through phenomenological analysis of extreme cases.

Qualitative data were collected through the initial interview, final questionnaire, field notes, and ongoing conversations that I had with BK's CEO throughout the research duration. Participants' responses were analyzed using the qualitative data analysis software package Atlas.ti. Themes and coding generated from the initial interview are presented in Table 12. Themes and coding generated from the final questionnaire are presented in Table 13.

Table 12

Initial Interview, May 2016, Themes and Coding

Theme	*Coding (Number of Codes) {Number of Respondents}*
Expectations from BK	(3): More suitable for small projects {2} Motivation: independency {9} Promoting art in Jerusalem {1}
Experience with BK	(8): BK is better than other NGOs {6} BK provides OAC tools of large firms {4} Collaboration with others {10} Financial benefit {6} Knowledge, learning, information system {10} Personal relationship with BK, Trust {7} Satisfied with BK {6} Simplify/streamline the project's work {10}
Expectations from BNK	(9): Doesn't know what to expect {9} Excitement towards BNK {13} expect automation {1} Following the vision {12} Goal - larger audience {9} Limited familiarity with BNK {6} Not excited about BNK {1} Unique / Precedential {5} Enthusiastic about Crowdfunding {3}
Experience with BNK	(3): experienced automation {6} Transparent Interface {4} Very familiar with BNK {4}
Critique	(2): Concern with Crowdfunding {7} Critique of BNK {7}
Goals and Motivations	(2): Goal - larger audience {9} Motivation: independency {9}
OAC Self-Evaluation	(4): Audience size {11} OAC goals {10} OAC structure {4} OAC personnel size {12}

Table 13

Final Questionnaire, February 2017, Themes and Coding

Theme	*Coding(Number of Codes) {Number of Respondents}*
Experience with BK	(10): The work with BK has not changed {5} The work with BK has changed {1} The work with BK has improved {2} BK has a positive effect on Human Resources {5} BK has no effect on Human Resources {2} Collaboration with others {2} Financial benefit {2} Working with Bar-Kayma is making the project possible {7} Satisfied with BK {5} Simplify/streamline the the projet's work {1}
Expectations from BNK	(4): Goal - larger audience {2} Enthusiastic about Crowdfunding {1} Expect financial benefit from BNK {2} produce high-quality culture in Jerusalem {1}
Experience with BNK	(13): A tool for multilateral support and collaboration {8} More familiar with BNK {7} BNK has a positive effect on Human Resources {5} An automated bureaucracy system {5} Not more familiar with BNK {4} BNK has no effect on Human Resources {3} Very familiar with BNK {2} Transparent Interface {2} BNK has improved {2} Very satisfied with BNK {2} Enthusiastic about Crowdfunding {1} BNK improves financial state {1}
Critique	(1): Critique on BNK {1}
Goals and Motivations	(2): Goal - larger audience {2} OAC goals have not changed {4}
OAC Self-Evaluation	(4): OAC goals have not changed {4} Improved capacity over the past 9 months {4} Increase in Audience size {3} OAC goals have changed {1}

Hypothesis 1: BK's Income

The testable operational definition of hypothesis 1 was: BK's monthly income mean will increase after the implementation of BNK throughout the examined period. In this section, I describe the Interrupted Time Series (ITS) model used for testing the influence of BNK on BK's income, present findings, tie results to the reviewed literature, and discuss the analysis limitations.

To gain an initial assessment of BNK's influence on BK's income, the participating OACs' income was calculated for the months that preceded the intervention, and for the months that followed the intervention. The result (provided in Appendix G) show that in the months that followed the intervention, the income mean among the twelve participating OAC has increase by 103%, and the expenses mean has increased by 79%. Descriptive statistics for BK's income pre-post BNK are reported Table 14.

Table 14

Descriptive Statistics for BK'S Income Pre-Post BNK

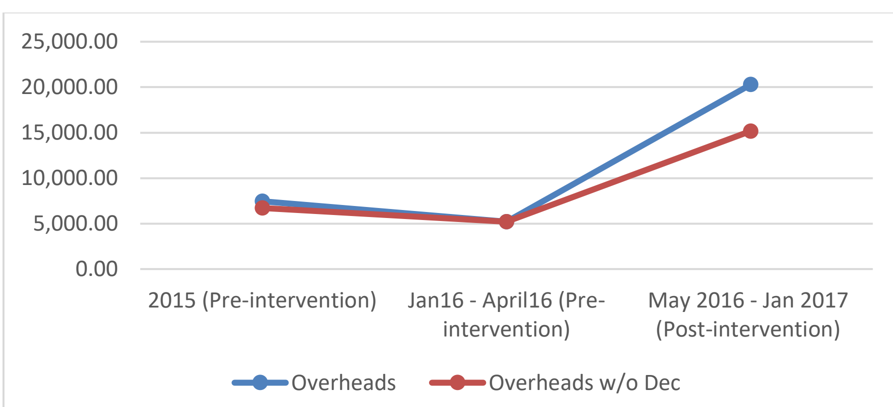
Phase	*n*	*M*	*SD*	*Minimum*	*Maximum*
Pre-BNK	16	6894.50	3807.40	1950	15705
Post-BNK	9	20287.44	16895.71	5586	61210
Total	25	11715.96	12135.25	1950	61210

The visible substantial growth in BK's income might be explained by other factors besides BNK. The main alternative explanation would be that there is linear growth regardless of the intervention, meaning that as time passes, BK's income increases regardless of the intervention (BNK). This alternative explanation poses both history and maturation threats on the internal validity of the research. Additionally, both factors (time and intervention) might interact to provide a valid complementary explanation.

In order to gain an initial assessment of that concern, the graph presented in Figure 3 was produced. The mean of BK's income is divided here into three periods – 2015 (pre-intervention), January 2016 – April 2016 (pre-intervention), and May 2016-January 2017 (post-intervention). However, since December is an outlier, if time would influence BK's income regardless of the intervention, it could be expected that BK's income in December 2016 would exceed the income in December 2015, and thus the data would be biased. Therefore, the graph presents two lines, one of which omits data from December 2015 and December 2016.

Figure 3

Monthly BK's Income Mean Pre-Post Intervention



In the graph presented in Figure 3, it is visible that before the intervention, BK's income decreased. Thus, the assumption that BK's income increased by time, regardless to the intervention, seems less likely. A further analysis of bivariate correlation between the IVs *phase* and *period,* and the DV *bk_in* was made. Due to the time-series design of the research, the observations might be autocorrelated. Therefore, this analysis does not provide reliable evidence to reject the null hypothesis [H0: There is no statistically significant difference in BK's financial capital between the months that preceded the implementation of BNK, and the months that followed its implementation.]. This concern is addressed in the following section.

The bivariate correlation, however, still provides an initial tool for assessment and a general confirmation that the intervention did have an impact on BK's income. A statistically significant correlation was found between the variables *phase* and *bk_in* and between the variables *period* and *bk_in*. However, the correlation between phase and *bk_in* is stronger (larger coefficient) and more significant (smaller p-value). Correlation values of BK's income with BNK and period are presented in Table 15.

Table 15

Correlation of BNK (Phase) and Period with BK's Income

Variable	*Pearson r*	*Kendall's tau_b*	*Spearman's rho*
Phase	.541**	.520**	.624**
p (2-tailed)	.005	.002	.001
Phase	.541**	.520**	.624**
p (1-tailed)	.003	.001	.000
Period	500*	.373**	.518**
p (2-tailed)	.011	.009	.008
Period	.500**	.373**	.518**
p (1-tailed)	.005	.004	.004

*p<.05. **p<.01.
Note. Pearson r tests for correlations in linear settings, while Kendall's tau and Spearman's rho are non-parametric tests for correlations in non-linear settings. I chose to report results of the three tests to show their similarity.

The results suggest that the null hypothesis could be rejected, thus BNK (*phase*) is positively correlated with BK's income (*bk_in*). However, since the observed values of *bk_in* were collected as a time-series, they might be autocorrelated, and thus, the bivariate correlations of *bk_in* with *phase* and *period* might be biased. In order to gain confidence in the results, I used the ARIMA statistical model.

The ARIMA Statistical Model

Hypothesis 1 was tested using the ARIMA(4,2,0) model. In the previous chapter, the ARIMA model and the rationale for its employment for analyzing BK's financial capacity were explained. The modeling process began with identification and estimation of the model, and eventuate in its diagnostics and interpretation of the results (Bernal, Cummins, & Gasparrini, 2017; Ramasubramanian, 2007).

Identification. In this stage, the DV's observations were evaluated for stationarity. When the series is non-stationary, differencing of the observations is performed to achieve stationarity. Data were transformed into a second differencing and stationarity was verified using the Dickey-Fuller test Dickey-Fuller = -4.12, Lag order = 2, p-value = 0.01899

Estimation. In this stage, different models were tested to determine suitability. An exploratory framework was utilized to examine the type of model that would best fit. The model that was found to be the most robust was ARIMA(4,2,0), with weighting of three outliers (automatically detected by the statistical software: January 2016, May 2016, and December 2016). This stage utilized the Time-Series analysis of SPSS to generate the most suitable model.

Diagnostics. The model statistics and parameters are presented in Table 16 and Table 17 respectively. The coefficient for period (313.37) is BNK's income regression slope before BNK, with P=0.013. The coeeficient of phase represents the intercept. The coefficient of interact (683.30) reflects the difference between the slopes before and after BNK, with P=0.001. Adding the coefficients of period (313.37) and the interact (683.30) produces the post-slope (996.70).

Table 16

ARIMA - Model Statistics

Number of Predictors	*Stationary R-squared* [b]	*Ljung-Box Q(18)* [c]			Outliers
		Statistics	*DF*	*P*	
3[a]	.971	19.01	14	.164	3

a. The predictors are *period*, *phase*, and *interact*, explained under the Variables section in chapter three.
b. A positive R-squared value indicates a good fit of the model in comparison to the base model.
c. The Box-Ljung significance is greater than 0.05, therefore the null hypothesis of independency cannot be rejected. This is a desirable result, since there is no evidence for autocorrelation.

Table 17

ARIMA Model Parameters

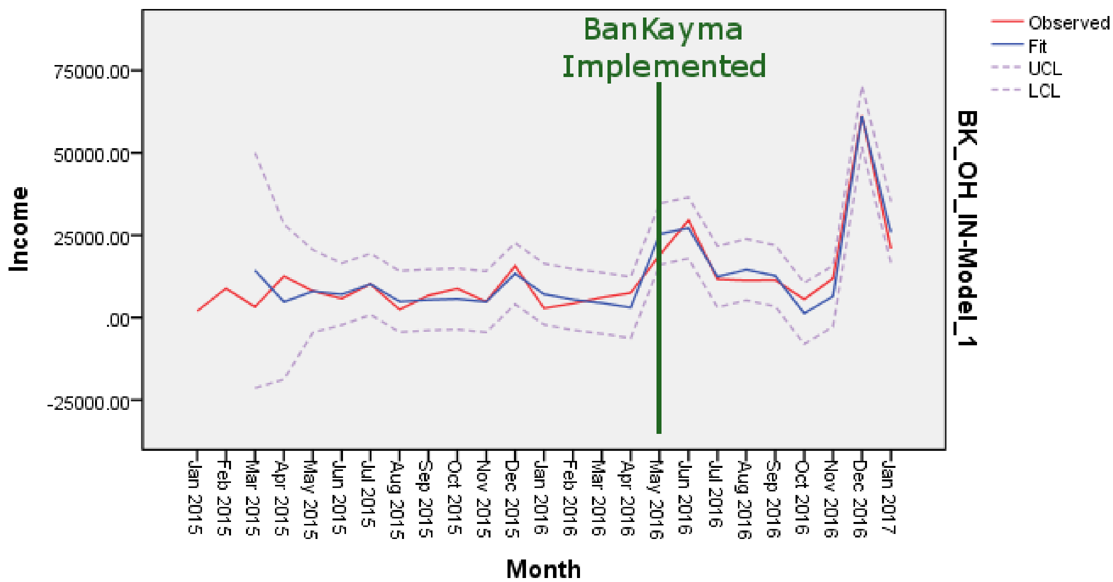
Variable[a]	*Estimate*	*P*
period	313.37	0.013
phase	-17645.41	0.000
interatct	683.30	0.001

a. Explained under the Variables section in chapter three.

The evaluation of BNK on BK's income was conducted through the ARIMA interrupted time series model. The results support the operational definition of Hypothesis 1, by which BK's income will increase after the intervention. Since the essence of ARIMA models relies on a time-series analysis, the influence of time is considered in the model, and thus, the history and maturation threats on the internal validity are addressed. The Interrupted Time Series model plot is presented in Figure 4.

Figure 4

ARIMA(4,2,0) - Model Plot



Interpreting the results

The coefficient of *period* (313.37) is BK's income regression slope before BNK was introduced, with P=0.013. The coefficient of *phase* is the intercept. The coefficient of *interact* (683.30) reflects the difference between the slopes before and after the implementation of BNK, with P=0.001. Adding the coefficients of period (313.37) and the interact (683.30) produces the post-slope (996.70). Therefore, the results suggest that beginning at 1,950 ILS (Israeli Shekels) income in January 2015 (the first month for which data are available for this analysis), the mean of BK's monthly income increased by 313 ILS per time-period prior to the intervention (May 2016). After the intervention, BK's monthly income mean increased by 996 ILS per time-period (an addition of 683 ILS), which reflects an increase of 218%.

Discussion

In chapter 3 a rationale was provided for using BK's income as the testable operational definition of Hypothesis 1, by which, those months prior to the intervention will have lower financial capital than those months after the intervention. Thus, Hypothesis 1 tested the effect of BNK on the OACs' income mean, through BK's income from OACs' 7% overhead to BK. This was conducted in accordance with the first level of analysis performed in the MSCM, which evaluates the success of the intervention among the organization's stakeholders in the nonprofit context of financial sustainability. The utilization of a time-series statistical model allowed me to address alternative hypotheses. It was concluded that BNK has a positive effect on BK's income.

The Interrupted Time Series (ITS) analysis, which produces results that support Hypothesis 1, followed previous similar endeavors to evaluate new programs in the context of nonprofit organizations (Harkreader, 2000; Henry & McMillan, 1993; Poister, 2008). However, the evaluation of a crowdsourcing-based program has the potential to add to the structural knowledge of the phenomenon. As stated in chapter 2, CS has been studied extensively in the for-profit context, and numerous empirical evidence of success are documented. Those cases typically use some type of material reward to motivate crowd participation. However, nonprofit organizations might not be able to offer a substantial financial reward to crowd members, and thus, the main challenge lies in the ability to motivate crowd participation. In light of this, the support found for hypothesis 1 provides empirical evidence for the utilization of a CS apparatus to increase the financial capital of both the organization and the crowd.

As the reviewed literature suggests, financial capital is one of three elements that form organizational capacity, which in turn determines the organization's capability to fulfill its goals. In the following section, the impact of BNK on BK's audience, which constitutes the operational definition of the second element that is comprised within organizational capacity, is evaluated.

Hypothesis 2: BK's Audience Size

The testable operational definition of hypothesis 1 was: BK's audience size will increase after the implementation of BNK throughout the examined period.

In accordance with the MSCM second level of analysis (OACs as the immediate impactees), data collected at multiple time-points and a combination of quantitative and qualitative techniques were used in order to provide compelling evidence about the impact of the intervention (BNK) on BK's audience size. Subsequently, three approaches were undertaken: (a) quantitative techniques were used to measure the change of the OACs' audience size pre and post BNK, and to determine the trend of the scope of activity within BK's network, (b) qualitative analysis of participants' responses regarding their audience size, and (c) mixed-methods that utilized empirical phenomenology analysis of outliers that were quantitatively detected.

Participants were asked in the initial interview (Appendix C, Question 5) and in the final questionnaire (Appendix E, Question 12) the following open-ended question: How many individuals comprise your audience (estimate)?

Since each OAC utilizes a different medium of expression and has a unique out-take on the essence of art and activity, participants were not required to provide an accurate number in the form of average audience size per a given period (e.g. 500 people in a month). Instead, participants were presented with an open-ended question that aimed to allow evaluation of their estimation on the audience's size. This was intended to enable a comparison of the participants' initial estimate of the audience size with their final estimation. Since both measures were subjective, the bias would be controlled. Furthermore, it allowed me to make comparisons of growth between groups that have different expected audience sizes. In this way, a cross-analysis can be conducted for an art gallery, a street orchestra, a radio station, a theatre group, a collective of hundreds of people who run an ongoing "cultural factory", and other OACs. Consequently, responses ranged from a few individuals to tens of thousands.

Quantitative Findings and Analysis.

As stated previously, two sets of data were generated to evaluate OACs' audience size: (a) participants' self-estimation of their audience size pre and post intervention, and (b) daily events on Jerusalemite.org for each day throughout the quasi-experiment process. Subsequently, two statistical tests were conducted to determine whether there is evidence to accept or reject the null definition of Hypothesis 2. First, the means of

OPMs' estimation pre and post BNK were compared. A statistically significant difference would suggest that OACs' audience size has changed after the intervention. Second, a correlation analysis was conducted between daily events within BK's network and the period spanned since the implementation of BNK. A statistical significant result would suggest that there is an increase in the OACs' activity volume, and thus in their exposure to audiences.

Participants' estimation. A paired samples t-test was conducted to compare OACs' audience size in May 2016 and in February 2017. There was no significant difference in the scores for May 2016 ($M=9472$, $SD=24826$) and February 2017 ($M=12370$, $SD=30892$) conditions; $t(9)=-1.48$, $p = 0.17$. However, since one OAC (represented by participant 12) constitutes an outlier[2], a second paired samples t-test was conducted to compare OACs' audience size in May 2016 and in February 2017, while omitting that OAC. In that setting, there was a significant difference in the scores for May 2016 ($M=1636$, $SD=1598$) and February 2017 ($M=2577$, $SD=2427$) conditions; $t(8)=-2.9$, $p = 0.02$. Results of both paired samples t-test are presented in Table 18.

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[2] Participant 12 constitutes an outlier in absolute terms for both pre and post intervention. This shall not be confused with the mixed-methods analysis of extreme cases, where outliers are defined by participants that experienced relatively high (H) or low (L) increase in their audience size.

Table 18

Descriptive Statistics and t-test Results for OACs' Audience Sizes

	Before BNK		*After BNK*			*95% CI for*		
Audience Size	M	SD	M	SD	n	*Mean Difference*	t	df
All OACs	9472	24826	12320	30892	10	-7208, 1513	-1.48	9
P.12 Omitted	1636	1598	2577	2427	9	-1690, -192	-2.9*	8

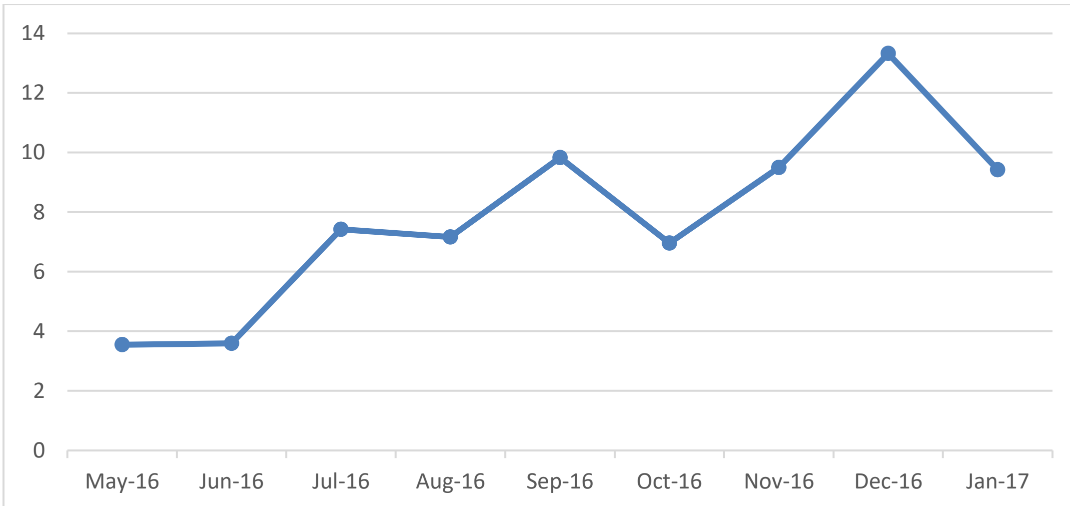
* p < .05.

These results suggest that BNK does have an impact on the OACs' audience size. Specifically, our results suggest that after BK implemented BNK, the audience sizes of its OACs increased.

Scope of activity. The second statistical test to find evidence to support Hypothesis 2 was conducted through a correlation analysis to quantify the relationships between the duration of BNK implementation and the scope of activity within BK's network. As described earlier in this chapter (section: Description of the sample, subsection: Audience size), the scope of activity within BK's network can be measured by the number of events published on Jerusalemite.org. This web platform is one of BNK's six features (explained in the section on the intervention in chapter 3), that was introduced in May 2016. The variable *period* indicated the month in its sequential order in the time-series, from 17 (May 2016) to 25 (January 2017). The variable *daily_events* indicated the daily mean of events per month of observation. The results show that there was a positive correlation between the two variables, $r = 0.832$, $n = 9$, $p = 0.005$. A line graph that summarizes the results is presented in Figure 5.

Figure 5

Daily Events in Jerusalemite.org by Month



The graph presented in Figure 5 suggests that there is an increase in the volume of events within BK's network in the nine months that followed the intervention. However, since Jerusalemite.org is one of BNK's features, it is only used by BK's OACs' PMs since May 2016, and therefore the increase in the number of events can be explained by an increase in the feature's usage rather than in a real increase in the number of events.

Quantitative analyses suggest, therefore, that OPMs' estimation on their OACs' audience size has increased following BNK's implementation, and that there is an increase in the number of events within BK's network. However, alternative rationales may provide valid explanations for these findings. In order to shed further light and evaluate the trend in the audience size of BK's OACs, a qualitative technique for data analysis was performed.

Qualitative Findings and Analysis

In the initial interview, interviewees were asked, in an open-ended question, to describe their OAC's goals. Nine respondents noted an increase of their OAC's audience size as one of their primary goals. This section includes extracted quotations of four respondents and my interpretation of the structure and core-concepts.

P5 The goal is quite clear - to hold regular meetings and to reach out to a lot of people, something like 70 every time.

P7 One ambition is to increase the number of students of all ages and the other one is to increase the number of performances.

P13 Of course, there is a goal that the target audience will expand.

P14 The idea is not to renew classical music by playing a certain repertoire, but to increase its exposure to more circles in the general public by aiming for additional audiences outside the concert hall which I believe have a lot of barriers.

Participants were asked to estimate their audience size in the initial interview (Appendix C, Question 5), and again in the final questionnaire (Appendix E, Question 12), in form of an open-ended question. Since each OAC utilized a different medium of expression and has a unique outtake on the essence of art and activity, participants were not required to provide an accurate number in the form of average audience size per a given period (e.g. 500 people in a month). Instead, participants were presented with an open-ended question that aimed to allow evaluation of their estimation on the audience's size. Consequently, responses ranged from a few individuals to tens of thousands. Moreover, participants were asked to describe the influence of BK and BNK on their OAC's human resources in the initial interview (Appendix C, questions 6 and 7) and in the final questionnaire (Appendix E, questions 13 and 14).

Participants 2 and 3 are BK's board member and BK's accountant, and thus their responses were omitted from the analysis. Additionally, participant 15 was not interviewed in May 2016 and one OPM did not provide responses that were suitable for making a reliable inference. Hence, inferences were made based on the change in audience size of BK and ten OACs.

Relevant extracted quotations of all participants' responses related to their OAC's audience, along with a brief inference for each, is provided in Appendix H. The following presentation of Participant 12 demonstrates the conducted analysis:

P12, May 2016:

> In the past year, it was about 80 thousand. In addition, thousands of people were exposed to our events.

P12, February 2017:

> Hard to say exactly, but the radio has tens of thousands of followers in the world (150 thousand over the last year).

P12 explains BK and BNK influence:

> Laying an organizational infrastructure that increases content production and decreases engagement with bureaucracy.

My interpretation of P12's experience:

> Large increase. Attributed to BNK. Participants estimated 80,000 in May 2016 and 150,000 in February 2017.

BK's CEO estimated a very large increase in BK's audience, which includes the overall audience of all OACs. Out of ten OPMs, six (60%) estimated their audience in February 2017 as substantially larger than their previous estimation, in May 2016. Five of those six participants attributed the audience increase to BNK, while one claimed that BNK had no effect on the audience's size. Three OPMs (30%) estimated a moderate increase in audience size. One of those three participants attributed the audience increase to BNK, one stated that BNK had no effect on the audience size, and one did not provide explanations sufficient for making an inference. Only one OPM (10%) estimated that there was no change in the OAC's audience size, and not a single OPM provided a lower estimation in February 2017.

Mixed-Methods Findings and Analysis

In accordance with the MSCM second level of analysis (immediate impactees), extreme cases of participants' estimation of their audience size were detected and analyzed. Case summaries of OPMs' estimations are presented in Table 19. Data for May 2016 are missing on participant 8 (did not provide an estimate) and participant 15 (was not interviewed). The fourth column presents the estimated increase in audience size.

The findings show that in regard to audience size, participants 5 and 14 have experienced the highest (H) increase, while participant 11 experienced the lowest (L) increase. Subsequently, those participants were identified as extreme cases, and empirical phenomenology analysis of their experience was conducted.

Table 19

Participants' Self-Estimation of Audience Size, Case Summaries

OPM (Participant ID)	*OACs' Audience Size Pre-BNK*	*OACs' Audience Size Post-BNK*	*Change %*
4	1000	1200	20
5	375	1000	167
6	3000	5000	67
7	500	1000	100
8	N/A	800	N/A
9	5000	6000	20
10	1500	2000	33
11	2500	2500	0
12	80000	100000	25
13	5000	8000	60
14	800	2000	150
15	N/A	400	N/A
Total (n)	10	12	10

Most successful cases. 90% of the OPMs estimated a larger audience size in the final questionnaire (February 2017) compared to their estimation in the initial interview (May 2016). In this section, I present and analyze the cases of the two OPMs that experienced the largest increase in their audience size.

Participant 5. P5 is one of the two founders of “Intro” and one of its six current active members. When I interviewed her in May 2016, the month in which BNK was first implemented in BK, she indicated the exposure expansion as one of Intro's primary goals. When I asked her to tell me about the project's history, she replied:

> The project runs year and a half, but began before it. We have a band of four members, two Palestinians and two Israelis. We have been together for several years, and the band changes over time. The project came out of the band. It is a meeting place where you can play together and meet around the music - a meeting between Israelis and Palestinians, it is not political, but a place for music. It happens once a month in various places in Jerusalem. We started in Ein-Kerem and then moved to the French Hill, which was really nice. We did one event in "beta" center in downtown Jerusalem and one event in the Ben-Hinnom Valley. We have already made some really nice things and it revolves around the idea that every meeting is devoted to a specific topic. There is a core group of people who are excited about the project - they are all Israeli and Palestinian musicians. At every meeting, there is time to perform, long jam session and mingling time. The project started in February 2015. Funny how it started. One man, named Vitali, was going everywhere in order to connect and promote peace. Once he came to the gallery "Pirates" and talked about his idea. When we saw that we had a similar idea, we started together, but after three times, he decided to move on. Since then I took up the project with other people who participate and want to participate.

From P5's description of the project, it can be understood that the composition of the OAC's potential audience consists of Israeli and Palestinian musicians in Jerusalem. In the initial interview, P5 estimated that the project's audience can be best measured by the number of members in its page on Facebook.com, which was then approximately 375 people. In the final questionnaire, nine months following the implementation of BNK, she estimated that 1,000 individuals comprise the project's audience. In

May 2016 P5 explained that BK contributes to the project's exposure by facilitating collaborations between various OACs, which allows the project to reach a larger audience. In February 2017 P5 expressed her belief that the project could have not existed unless it would operate within BK's network. She repeated her explanation from May 2016 regarding the collaboration with other groups and artists, and added that BK contributes to the public recognition that the project receives. However, when P5 was asked to estimate the contribution of BNK to the OAC's exposure, she replied that it was limited, and had only an indirect impact as it allowed the project to efficiently manage its finances. Therefore, P5 estimates that within nine months from the implementation of BNK, her OAC's audience tripled itself, though she does not attribute that increase to BNK.

Participant 14. P14 is one of the several founders of "Barbur Gallery", and one of its seven current active members. When I interviewed her in May 2016, she indicated that the OAC faces existential threats, and therefore its primary goal is to survive. When I asked her to tell me about the project's history, she replied:

> It is defined as contemporary art gallery, established in 2005 by a group of artists. Over the years, artists who run the gallery changed but the mechanism remains. I am the only and last remaining from the founding generation - the rest were replaced. The gallery is unique because it is not satisfied with only the exhibition but also has developed relationships with a variety of different environments and communities.

When I asked her to estimate the OAC's audience size in May 2016, P14 replied:

> “Because many things happen at Barbur beside gallery exhibitions, such as lectures, events and so on, the overall audience is around 800 people a month.”

From P14’s responses, it can be understood that the composition of the OAC’s potential audience consists of various types of visitors, such as art consumers, students and the general public. In the initial interview, P14 estimated that the project’s audience can be best measured periodically, and stands on an average of 800 individuals per month. In the final questionnaire, nine months following the implementation of BNK, she estimated that at least 2,000 individuals visit the gallery in a month. In May 2016 P14 argued that the OAC would not exist unless it could operate within BK’s network. When asked to estimate BK’s and BNK’s impact on the OAC’s audience in the final questionnaire, P14 stated that the ‘Financial impact is unambiguously positive’. However, P14 noted that ‘There is a blur between BanKayma and Bar-Kayma. BanKayma is the online existence of Bar-Kayma.’ Therefore, P14 estimates that within nine months from the implementation of BNK, her OAC’s audience increase by 150%, though she does not attribute that increase to BNK.

Least successful case. No OPMs estimated a lower audience size in the final questionnaire (February 2017) compared to their estimation in the initial interview (May 2016). In this section, I present and analyze the single case of an OPM that experienced the lowest increase in the audience size.

Participant 11: P11 is the OPM and one of approximately fifty active members of "Radio City Center". When I asked him to tell me about the history of the OAC, he replied:

> It started as an online radio station 4 years ago, in 2012. It broadcasts online only. It was established after the social protest movement, from a desire to create some kind of young voice, more connected to reality, the people and what is happening in here. It was very small and preliminary. It operated from "Salon Shabazi" in Nachlaot, one day a week, for several hours. A good bunch of people gathered around it. After the radio left that location, we moved to "Hasira". We began to broadcast twice a week. Eighteen months ago we moved to "Beta", and we are still here. It is a complex of art, society and city. It is operated by the municipality. Then things started to stabilize. Today we are regularly broadcasting four days a week and we have 40-50 volunteers and 8 team leaders that constitute the organizational-administrative structure of the radio. There are some areas, content, production, media, marketing, finance and events. There's also my job - director or chairman of the project. But the idea is that the radio does not belong to anyone but is managed by the whole collective together. I am working to regulate the activity as someone who sees the large picture and can understand the feasibility of allocating resources, but the decisions are being made together, democratically by all members.

P11 explained that the OAC was founded as a reaction to the 2011 social protest in Israel. The social protest was a movement of thousands of Israelis, typically aged 20-30, that moved in the summer of 2011 to live in tents in the centers of large cities to protest the government's social policy (Rosenhek & Shalev, 2014). By that, P11 defined the common goal of the OAC's active members – promoting a social change.

When asked in the initial interview about the OAC’s audience, P11 delineated the then-current and the potential composition of the OAC’s audience as individuals “living in Jerusalem, aged 20 to 40 or more. These are people from the pluralistic side of the map that wish to be exposed.” P11 stated that while the OAC does not have the ability to measure its audience accurately, he estimates that, based on the number of unique monthly visits to the radio’s web-site, there are at least 2,500 individuals who regularly consume the radio’s content.

In the final questionnaire, P11 did not provide an estimate, but noted that there was no noticeable change in the audience’s size since the initial interview. However, when asked about the impact of BK on the OAC’s audience size, P11 noted that “currently it has no influence on the audience, except through the publications of events in Jerusalemite.org”. P11 provided a similar response regarding the impact of BNK on the OAC’s audience’s size. These two responses indicate an unintended participants’ link, as Jerusalemite.org is one of BNK’s features. Therefore, although P11 did not provide a distinguished estimate of his OAC’s audience size, the context of his response reveals a different scenario. On one hand, a reliable inference on a change in the OAC’s audience’s size cannot be based on the participant’s responses. However, on the other hand, the responses lay groundwork for a reliable inference on the positive influence of BNK on the OAC’s ability to reach out to its potential audience. Finally, P11 stated in the initial interview and final questionnaire, that BK furnishes the OAC with enhanced capabilities to cooperate with other groups of artists and to streamline its finances.

All three participants that were reviewed in this section indicated the managerial and financial aspects as the most prominent benefits for their OACs from the relationships with BK. P5, from one hand, indicated BNK as the mechanism by which BK carries out its ability to provide supports in these aspects. P14 and P11, from the other hand, attributed the financial and managerial support to BK rather than to BNK, while specifying distinguished BNK functions as their working tools. Therefore, the three reviewed cases – both the successful (H) and the failed (L) ones, provide evidence that BNK has a positive influence on the OACs' financial and managerial capabilities. One successful case linked the support in these areas to its experience of an expanded audience in the nine months that followed BNK, while the other noted that this is an indirect influence. Both successful cases noted that they estimate that their OACs would have not existed unless they would operate within BK's network. The third reviewed case, which was categorized as a failed one, since the OPM did not provide a higher estimate of its audience size in the final questionnaire, did indicate that one of BNK's features, Jerusalemite.org, had a positive impact on its ability to reach out to potential audiences. Finally, the failed case is a single one among all participants – all others have indicated an increase in their audience size.

Therefore, the qualitative findings and analysis suggest that there was an increase in the audience size following the implementation of BNK into BK's organizational structure. From the total of nine (BK's CEO and eight OPMs) participants that indicated an increase in their OAC's audience, six explicitly attributed their improved performances to BNK. On that account, it is concluded that the implementation of BNK into BK's organizational structure had a positive influence on the OACs' audience size. From nine OPMs, eight (89%) estimated larger audience size nine months following the implementation of BNK.

Discussion

In chapter 3 a rationale was provided for using BK's audience size as the testable operational definition of Hypothesis 1, by which, those months prior to the intervention will have lower structural capital than those months after the intervention. Hypothesis 2 was addressed using a combination of quantitative, qualitative, and mixed-methods. Each of which was used to evaluate the impact of BNK on BK's audience size. The results support Hypothesis 2 as they provided evidence for a significant increase among the OACs' audience size.

Two quantitative analyses were conducted to evaluate trends in audience size: (a) A comparison of quantified data stem from participants' estimations in the initial interview and final questionnaire, and (b) An examination of data retrieved from jerusalemite.org, that reflects the overall activity within BK's network. A qualitative approach was used through a phenomenological analysis of participants' responses to open-ended questions regarding their audience size. Finally, in accordance with the MSCM's second level of analysis (Coryn et al., 2009), a mixed-methods approach was carried out through narrative analyses of OPMs that were quantitatively identified as outliers, thus presenting extreme cases.

The findings affirm Lawrence & Lorsch's (1967) theory that a positive correlation exists between organizational size and its differentiation. As such, BK can be perceived as an empirical exposition where organizational structure influences its ability to implement new technological solutions. Given that the OACs consumed services from BK within the studied network, the presented findings correspond with Wexler's (2011) notion, by which crowdsourcing may be used to motivate social action in the nonprofit context through merging the interests, as well as the production processes, of the organization and its clients.

Hypothesis 3: Satisfaction with BK

The testable operational definition of hypothesis 1 was: The satisfaction rate of BK's members will increase after the implementation of BNK throughout the examined period.

In accordance with the MSCM third level of analysis (downstream impactees), data collected at multiple time-points and a combination of quantitative and qualitative techniques were used in order to provide compelling evidence about the impact of the intervention (BNK) on BK's members' satisfaction. Subsequently, two approaches were undertaken: (a) quantitative techniques were used to measure the satisfaction of BK's members pre and post BNK, and to determine the trend of their satisfaction during the research process, and (b) qualitative analyses of participants' satisfaction with BK and BNK. An additional attempt was made to conduct mixed-methods through phenomenological analysis of quantitatively detected outliers. However, no evidence for statistically different rates of satisfaction found to complete this analytical direction.

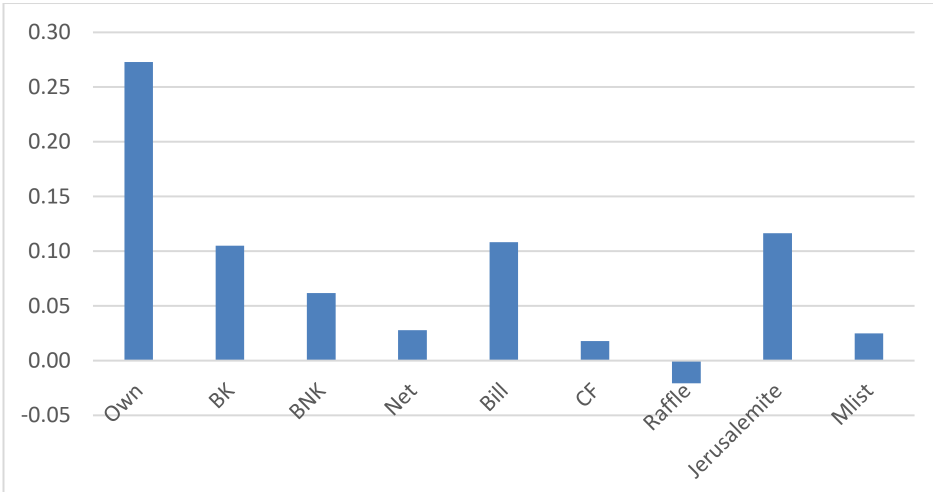
Quantitative analysis was made using data collected from participants' responses to close-ended questions to rate on a Likert-type scale, their satisfaction with each of BNK's features in six time-points: the initial interview, four monthly surveys, and the final questionnaire. Qualitative analysis was made on data collected from participants' responses to open-ended questions. The two approaches were integrated to draw conclusions.

During the initial interview participants were asked to describe the work with BK and BNK. In the final questionnaire, participants were asked to describe the change (if any) in their work with BK. In both the initial interview and the final questionnaire, participants were asked to add their comments on each of BNK's features and to describe the influence of BK and BNK on their OAC.

In the four consecutive monthly surveys, from July through October 2016, participants were asked to rate the change in their satisfaction with their own OAC, with BK, with BNK, and with each BNK feature. Participants were instructed to indicate 1 for large decrease, 3 for no change, and 5 for large increase. The monthly means of all responses were previously calculated for each element (Table 11). Later, responses were transformed to a scale of -1 to 1, and the grand mean of each element was calculated. This was be done through two steps: (a) subtraction of 3 units, and (b) Dividing the result by 2. The results (illustrated in Figure 6) show that participants' satisfaction with their own OAC demonstrated the highest score mean.

Figure 6

Participants' Satisfaction, Standardized Mean Scores



Quantitative Findings and Analysis. Participants' satisfaction scores in the initial interview and final questionnaire, were analyzed using paired samples t-tests. Apart from "Bill", which all participants indicated that they were very satisfied with in the final questionnaire (February 2017, post-BNK), satisfaction rate mean decreased in comparison to its value in May 2016 for of all other BNK's components. Crowdfunding initiatives is BNK's component with the lowest satisfaction score mean. However, this analysis failed to reveal a significant difference between any of the paired samples. The sample means, presented in Table 20, show that BNK features in February 2017 condition demonstrated satisfaction scores which were quite similar to those scores in May 2016.

Table 20

Paired Samples t-tests Results of Participants' Satisfaction with BNK

	May 2016		*February 2017*			*95% CI for Mean Difference*			
BNK Feature	M	SD	M	SD	n		t	df	P
Bill	4.55	0.69	5.00	0.00	11	-0.92, 0.01	-2.193	10	0.053
BNK Network	3.89	1.36	3.89	1.05	9	-1.02, 1.02	0.000	8	1.000
Jerusalemite.org	4.18	0.98	3.82	0.87	11	-0.18, 0.91	1.491	10	0.167
Mailing List	3.86	1.46	3.43	1.40	7	-1.33, 2.19	0.596	6	0.573
Raffle	3.92	1.24	3.83	1.27	12	-0.87, 1.04	0.192	11	0.851
Crowdfunding	4.00	1.29	2.57	1.40	7	-0.07, 2.93	2.335	6	0.058

Qualitative Findings and Analysis

In the initial interview (May 2016) and final questionnaire (February 2017) participants were asked to provide information about their OACs, their plans, their work with BK, the experience and expectations of BNK, and to share anything that they considered important. The aim of the interview was to build context and lay a basis for future evaluations, in accordance with the undertaken empirical phenomenology approach. Extractions of participants' responses are provided in Appendix I.

Satisfaction with BK in May 2016. Throughout the interviews, participants typically expressed appreciation to BK and to the two people who initiated and operated the association. Six participants, including five OPMs, articulated their perception of

BK in terms of lasting personal emotions, such as love and trust. P2 stated “I loved [BK’s CEO] and [BK’s administrative manager] for years. I consider them as the royal couple in this city.” P8 felt that “everything goes as between friends,” and P9 noted that BK is the institution he trusts the most.

Ten participants expressed strong appreciation to BK. P5 represented that notion when stated “…that the Bar-Kayma association is really cool and I appreciate the way they work and communicate. They are very clear. They are very helpful to us and give us a framework in bureaucracy and practical foundations for the submission of plans and budgets. All this is amazing help…”

Streamlining was a common narrative, which was noted by ten participants. OPMs stated that BK was able to simplify, improve or streamline their work. P11 argued, for instance, that BK “does not only save human resources, but also facilitates organizational order and saves time, because they have experience and familiarity beyond what can be evaluated.” Three participants stated that they have experience with other organizations and their impression is that BK is more efficient. P14 noted in this regard that he has an “experience working with traditional mechanisms. In comparison, the work with Bar-Kayma is a bureaucratic paradise.” Five participants defined BK as unique. P2 asserted that he dos “not know of anything similar,” and P9 shared this view when stated the she is “Not familiar with a similar online platform. It will be judged in real-life.”

Another view, which was shared among participants, saw BK as a provider of tools that are typically accessed by large firms. P4 argued that **"**They furnish us with a formal body which is a nonprofit organization that allows us to put on a show which can sell tickets, pay theatre, pay musicians, and pay a lighting designers or whatever we end up paying to do the show that is necessary because we can't do it as private citizens." Collaboration enhancement seemed to be one of the prominent traits participants attributed to BK. P5 noted, as many others that "There are many groups of artists in Bar-Kayma. We cooperate with them and expand our circle of friends in our first circuit."

Financial benefit emerged as the results participants experienced and expected from BK. P4 summarized the common notion: "For us, it helps on the financial side. The interface with BK allows us not to hire people who are dedicated to do that…. The financial picture of putting on a show makes it very hard to cover costs by selling tickets, so the idea of applying for a crowdsourcing platform or for grants can be very helpful and important for us." P13 attributed her OAC's ability to raise funds to the work with BK: "The fact is that we received this year support from the municipality and the Ministry of Culture, this is something that would not be possible without Bar-Kayma." P8 claimed that being a member in BK's network has a financial value: "The name of Bar-Kayma helps us in finding and mobilizing resources."

Participants described BK as a knowledge, learning, and information system. P9 explained that he attended BK's preparatory program "where I learned about organizational management." BK's combines different layers of assistance to its OACs, as P10 put it: “In the initial stage, we met a lot to learn to manage the organizational and financial facets of the project. Periodically they consulted with us about artistic areas.” This finding was further anchored with P11’s attestation: “An additional side is their external consultancy. I try all the time to strengthen ties with Bar-Kayma because it allows further observation by an organization that is well-acquainted with the project and the environment. With [BK’s CEO] I consult on legal issues, and with [BK’s administrative manager] I consult regarding calls for proposals, fundraising, cooperation, and more. I sometimes bring up organizational dilemmas, such as relationships and interpersonal behavior with team leaders.”

BK as a knowledge and learning system gave forth for an additional emerging theme, which considers BK as a mediator between artists and the practical manifestation of organizational dilemmas. In this context, P13 stated that “They are really involved in the project. It is very helpful that people with knowledge and experience are involved with everything that is happening around.” P14 provided another evidence when she noted that “From the moment we started working with [BK’s administrative manager] and [BK’s CEO], they taught us organizational structure and management. Therefore, everything we built was renewed in the past two years through Bar-Kayma.”

BNK – Experience and Expectations. The initial interview was conducted in May 2016, the same month that BNK was implemented as part of BK’s organizational structure. Therefore, participants already had a short experience with the new tools.

Five OPMs stated that they are familiar with BNK and could also describe it. They typically expressed a great deal of satisfaction with the apparatus, and mentioned repeatedly the concept of automation.

P4 noted that he was “very impressed with the way that they automated procedures as much as they were able to, in order to leverage relatively small manpower but handle a lot of different projects. For example, when the musicians need to be paid, I send them a link to an online form which BK has set up. The musicians fill in the information in the online form and then it is handled automatically, which is a lot more efficient than having a musician call somebody and start a discussion. P6 added that “Everything is simple, automatic and online. It is very convenient that you can manage it all without the need for an interpersonal connection.” A similar proclamation was made by P10: “This procedure facilitates online automatization of methods. This keeps expanding. Now it is already very beautiful. Our entire financial relations with the artists is conducted through the system. They actually interact with the system without my intervention. I only get automatic monthly reports from BanKayma and see that everything is in order.”

Six participants argued that they have experience working with other nonprofit organization, and BK’s system was superior. One of them is P12 who stated that he works “with other agencies besides Bar-Kayma and I see that BanKayma tools enable efficiency and order at a much higher level.” However, two participants have expressed their impression that BNK is an online existence of BK. These expressions were coded as unintended links that suggest a transparent interface that I interpreted as a desirable outcome. For example, though Bill, one of BNK's features, is a robot that handles payments to suppliers, P4 "thought that there is a person called Bill." Similarly, P9 suspected "that [BK's administrative manager] is really the robot. But it's an amazing tool that meets all expectations."

Most participants stated that they were not familiar with BNK's features in May 2016, the first month of its implementation. During the initial interview, participants were asked to describe BNK and their familiarity with the apparatus. The following three quotations extracted from the transcriptions represent this finding:

P7 I know this is a project that engages a lot of people who are part of Bar-Kayma. The goal is that everyone gives a token amount and the collected monthly amount is drawn by one of the groups. It's an amazing idea that allows the groups to have more resources.

P11 Yes, but it's fairly new, so I'm still not very familiar with it.

P14 Yes, I heard of the idea. When it started I was abroad. I am enthusiastic and supportive but have not yet started working with it.

Additionally, participants generally noted that they don't know what to expect from BNK. P9 stated that "All I know is that it costs 30 NIS [approximately 10 USD] a month that is allocated to one of the projects through a random drawing. It seems like a great idea, even if it is not yet fully active. For example, for us, we're not big enough to make our own subscription program, but under this program we can offer our audience a subscribing platform." Other participants expressed similar perceptions:

P11 optimistic idea, an idea now … If it succeeds to expand the circle, that would be good. Otherwise it would be nice but not beyond.

P12 It is essentially theoretical. Started two days ago and as a concept.

P13 At first I did not like the idea that I have to participate, but still I decided to go with it… The idea of BanKayma is still not clear to me, but I hope that in six months things will be clearer.

P14 A very supportive communion. It depends on user Friendliness

However, when participants were asked what expectations they have for BNK, fourteen stated that while it is somehow vague to them, they expect positive results, owing to their existing state of emotional cognizance and trust in BK. Two participants stated that they follow a vision, such as P2 who shared that:

> In a recent international conference of artists from around the world, we talked about seeking affordable paths for creation. We said that there is no comfort zone in Jerusalem. Here the creation is a statement in itself. I have been exposed to the activities of [BK's CEO] and [BK's administrative manager] over 9 years already. They are people who stayed here and provided a lot of support to the artistic and cultural activities in Jerusalem. More than ten years ago, prior to Bar-Kayma, they supported my ideas from the beginning, free of charge, just because they liked what I was doing. Therefore, I am always at their service and the service of those who work with them. Everything they do – Bar-Kayma and BanKayma are groundbreaking here. They help artists here to work. I do not know of anything similar.

P5 explained: “I see what they do within the framework of the Internet and for me it's cool that they make it available.” Similarily, P7 noted that “This is a new system and I do not know much about computers, but I'm learning. It seems like a genius idea that many people work and create common knowledge. It's charming.” P12 addaed that “Assuming I get the idea, it's the kind of thing that [BK’s CEO] and [BK’s administrative manager] do and I questioned them but eventually realize they were right. I trust them and wait to see how it evolves. I'm going after them with my eyes closed. I really trust them. “

During the initial interview, most participant expressed their excitement about BNK, and claimed that the concept has reached out beyond the scope of BK’s network. P3 mentioned that he “heard from people who were thrilled by the idea. Jerusalem needs it,” and P8 added “The community is so small that anything that would strengthen it is needed. Even my friends who are physicists have heard about it and are excited.”

BK’s CEO and BK’s board member expressed their hope that the apparatus would be implemented by other organizations that operate in other cities around the world. This notion was shared also by P12 who argued that:

> BNK is cool, it works by itself. I believe that soon other nonprofits will copy the technique…. It is very lacking in Jerusalem and every major city in the world. It is a smart filtering system that gives comprehensive information about what is happening. It is a smart system that knows how to generate a map of relationships within a broad cultural network within the

city. it is great…. If the experiment goes well it would be amazing and if not, then it is also terrific.

However, most participants have stated that while they are excited, they also have concerns. Some have shared their critique on BNK:

P6 It is oppressive that I must be part of it

P8 It is a good idea though problematic because it would be difficult to reach a wide audience.

P10 Today half of Bar-Kayma's budget comes from [my OAC]. We are the biggest project and all projects are receiving equal services, which I think is problematic. I would expect to receive more than other projects, so I'm not sure what will happen next. Without Bar-Kayma we couldn't succeed with the initial phase of the project, but now we're large enough to act independently. Bar-Kayma gets 7% overhead from each project, and for us it is actually a very high amount. If we would employ an accountant it would be cheaper for us. They do an amazing job and are the best in their field. It is the best solution for projects at the beginning of their being. For larger organizations, like us, they should come up with a cheaper contract or those projects would have to withdraw from Bar-Kayma.

P10 Maybe there is something wrong as it involves cost to participants.

P11 I know that until now they requested projects in the Bar-Kayma to pay 30 ILS (approximately $10) a month and once a month there will be a raffle that one of the projects would receive some amount. Some projects can really use this money, but I do not know what the feasibility of it, is due to the utilitarian nature of people. It may succeed or fail in the same way…

There is something too optimistic about it. Not sure it will work in Jerusalem. It can happen but not sure how…. The interface was built in a very beautiful way but is currently a pilot. There are some things that need to be changed in the system.

One concern that was shared by six participants revolved around Crowdfunding. In that regard, P3 predicted that it cannot replace institutional foundations. During the initial interview, participants were asked to provide their comments on BK's crowdfunding initiatives. The following quotations were extracted from several responses:

P5 It will help a lot. There is "Indiegogo" and other platforms but there is a problem with existing platforms because there is a deadline for each campaign, and we have something lasting. We are looking for how to do it with Bar-Kayma's help.

P6 I am ambivalent. In the broadest sense, it's great, but on the other hand it operates commercially, so it does not reflect the ideal form of participation.

P8 I am in favor but it can require populism. I cannot write posts on Facebook. There is a danger in an attempt to please the crowd. But this is the direction since we cannot rely only on grants.

P12 PayPal is not a great option but it is still the best. Other platforms may be packed more beautifuly, but the commission is not worth it.

The core motivation of this study is to understand the influence of BNK on BK. Nine month after BNK was implemented and participants were interviewed on their experience and expectations from BNK, participants were approached again and were asked to fill out a questionnaire. How have participants described their experience with BNK nine months following its implementation?

BK's CEO explained that "In the first two years we accepted projects, but then we reached our capability limit and we did not accept more projects. However, since we implemented BanKayma, we increased our efficiency and were able to support more projects, so recently we accepted several new projects, such as the "factory" and "pirates". In the final questionnaire, participants were asked whether there was a change in their work with BK. While three participants reported a positive chage, most participants responded that there was no change in the way they work with BK. For examole, P5 responded that "There was no change, Bar-Kayma supports our project consistently." On the other hand, P9 stated that "The work with Bar-Kayma was greatly improved, both because of the automation of the system, and because of the availability of [BK's CEO] and [BK's administrative manager] when automation is not enough."

P10, who expressed the most substantial critique towards BK in May 2016, explained in February 2017 how his concerns were solved:

> We separated between the bar and the artistic activity. The bar no longer operates as part of Bar-Kayma, but as a for-profit business. The cultural and community activity remained as a member project in the Bar-Kayma network.

Participants were asked whether they became more familiar with BNK during the nine months since its implementation. Most participants claimed a moderate improved familiarity, while four participants reported no change, and two participats argued that they were significantly more familiar with BNK. However, those who reported no change, also noted that they are satisfied with the apparatus and were able to describe it more accurately than they did during the initial interview. Thus, it was concluded that participants typically underestimated the improvement in their familiarity with BNK. For example, P10 argued that "There was neither improvement nor deterioration - everything is really good with them," and P9 explained that "Bill has greatly improved, we won the raffle, Drive templates are improving all the time!"

However, a participant who claimed to be familiar with the system might not be aware of different aspects in it. The opposite direction is no less probable – a participant who has not demonstrated familiarity with the system in May 2016 and claimed to not be more familiar with the system nine month following its adaptation, might be able to demonstrate a high degree of familiarity. In order to explore the unconscious familiarity of BK's members with BNK, they were asked to describe BNK in their own words. Descriptions provided by nine OPMs and BK's board member show that nine months following BNK implementation, BK's members are well familiar with it.

Several respondents provided a holistic description of BNK, such as P5 who viewed it as a "concept of uniting activists in the city of Jerusalem and mobilizing resources in favor of them by multilateral supports of individuals, collectives, and projects." Other participants focused on specific components of the apparatus, such as P14, who stated: "I do not use it. I use only Bill and a Drive. I've got everything I need there. I know the Raffle but do not get to use it."

Another question that participants were asked was to describe the influence of BK on their OAC. One OPM stated that there is no effect, while the other expressed a positive or a very positive effect. A common proclamation made explicitly by four participants was that they feel that their OAC would not be able to exist unless it would operate under BK's umbrella. For instance, P5 claimed that "Bar-Kayma's impact is unmeasurable. If I did not act under Bar-Kayma the project wouldn't exist since we would be overwhelmed by the bureaucracy." P13 explained that "Working with Bar-Kayma allowed [the OAC] to increase its activity tremendously. Growth is reflected in the number of [activities], in the size of the budget, and in the [OAC] ability to raise funds for its operations.

Participants were further asked to describe the influence of BNK on their OACs. Four OPMs estimated a substantial positive effect, while others claimed that BNK had a moderate or no impact on their OAC. However, a narrative analysis of their responses revealed a different picture – the impact of BNK was attributed to BK, as BNK became transparent to the end-user. For example, P5 argued that BNK had no effect on her OAC, though noted that "…we won the raffle. However, indirectly the existence of BanKayma allows the transfer of funds (donations, funding, etc.) which has been very helpful." P15 summarized this notion in her response: "I don't know…. I find it hard to distinguish between Bar-Kayma and BanKayma."

Altogether, three participants stated that BNK has no effect on their OACs. Two participants reported a slightly positive effect, four participants indicated a large positive effect, one participant reported that she doesn't know and three participants argued that there is a confusion between BK and BNK. They argue that when they work with BK they are unable to tell if they are using BNK's tool or working with a real person. For the previous question, the influence of BK on the OACs, 90% of the respondents estimated the influence of BK on their OAC is very large and positive. Three of the respondents argued that their OAC could have not survived if it were not for BK. The only participant who responded that BK has no effect on the OAC is an OPM of an OAC that reduced its activity level almost completely due to difficulties within the group.

BK's CEO was asked to describe his experience with BNK nine months following its implementation:

> It was improved and I feel more confident in my knowledge and my ability to explain and use its tools. One of the important things in crowdsourcing is to define the crowd. There is an overlap between this concept and the concept of community. When you build a platform for communication, it's something that should be set and defined first. So we are developing the Jerusalemite.org platform also as a transverse information resource about what is happening in Jerusalem in general and what is happening in the BK's projects in particular. Consequently, we approach new audiences. We also developed the Raffle which is a shared platform for the distribution of resources among members. These tools allow projects to cooperate, and the public is the primary beneficiary.

I asked BK's CEO to tell me how BK has evolved since the implementation of BNK:

> In the first two years, we accepted projects, but then we reached our capability limit and we did not accept more projects. However, since we implemented BanKayma, we increased our efficiency and were able to support more projects, so we were able to accept several new projects, such as the "factory" and "pirates".

Explaining the Extreme Case of Bill. While quantitative analyses failed to reveal outliers among participants' satisfaction with each of BNK's features, qualitative analysis of participants' experience suggested that Bill was the BNK feature that participants were the most satisfied with. During the initial interview, two participants argued that they suspect that Bill is a real person, and in the final questionnaire participants' satisfaction rate mean with Bill was five out of five, indicating 100%.

As explained in chapter 3, Bill is a robot that communicates with artists on one hand and with service and equipment suppliers on the other hand, and allows them to receive or make payments, order services, etc. Bill can be initiated by email or through a link to an online form. Bill is used through google.com server. BK's CEO describe Bill in those words:

> An online tool for suppliers to receive payment from the organization. It is a robot that facilitates an automatic connection between suppliers and project managers, and produces updates of budget files in the Sheets Folder.

Since outgoing messages from Bill are signed by "Bill", several participants assumed that BK has recruited a new employee named Bill. P4 explained in May 2016 that he "thought that there is a person called Bill, maybe a testament to the effectiveness of the procedure. But eventually I discovered it was not really a person there…"

P9 expressed her suspicion that [BK's administrative manager] 'is really the robot. But it's an amazing tool that meets all expectations…"

Discussion

In chapter 3 a rationale was provided for using participants' satisfaction with BK as the testable operational definition of Hypothesis 3, by which, those months prior to the intervention will have lower structural capital than those months after the intervention. Accordingly, it was hypothesized that participants' satisfaction with BK would increase following the implementation of BNK. While quantitative analyses did not yield supporting evidence for Hypothesis 3, a compelling qualitative analysis showed high degree of participants' appreciation to BK and satisfaction with BNK, which was evident throughout the research period. Thus, it was concluded that since participants' satisfaction rate was high in May 2016, and since quantitative analysis found no significant change in February 2017, the qualitative findings support Hypothesis 3 by reconstructing the causal relationships.

While a research gap exists, the process and methods used for addressing Hypothesis 3 corresponded with Brabham's (2008) call for qualitative research through interviews with individual members of a given crowd, which he argued would contribute to the understanding of the conditions that make crowdsourcing initiatives succeed or fail. The findings show that in comparison to May 2016, participants demonstrated a substantially higher degree of knowledge about and proficiency with BNK's features.

However, participants' satisfaction with BK, which was evidently high in May 2016, did not change.

Participants were asked to rate their satisfaction with BK and BNK on a Likert-type scale in the initial interview and on the final questionnaire. Additionally, participants were asked to rate the change in their satisfaction in four consecutive monthly surveys from July through October 2016. Quantitative analyses of those close-ended questions found no evidence for statistically different rates, between May 2016 and February 2017, of participant' satisfaction with BK and BNK. However, the results showed a significant increase of participants' satisfaction with the progress of their own OACs. A compelling phenomenological qualitative analysis of participants' experience indicated that participants indeed attribute the increased satisfaction with their own progress to BK. Furthermore, the analysis revealed that participants utilized BNK and referred to it as a unique and groundbreaker apparatus.

Participants typically expressed a sense of detachment from the official bureaucratic system, and viewed BK as a channel of mediation that allows them to focus on their work and simultaneously facilitates efficient handling with essential managerial facets. This finding is consistent with Jones et al.'s (1997) theory of network governance that considered the contrast between formal bureaucracy and the advantages of an informal social system that is made possible in a networked institutional dynamics.

A core element of the goal-setting theory refers to satisfaction. When a goal is achieved, it increases satisfaction and in turn, satisfaction yields increasing commitment and performance (Locke & Latham, 2002). Indeed, a common goal among OACs, which was evidently achieved as showed previously, was to increase exposure. Additionally, the financial capital of BK and most OACs increased substatially. Finally, all participants expressed a positive satisfaction with BK throughout the research period. The findings are consistent, therefore, with the goal-setting theory that in respect to the case studied, would predict an increase of members' commitment to BK, and in turn, an improvement of the overall performances in the network.

It is worth noting, though, that the findings suggested that during the research period participants failed to carry out crowdfuning campaigns. In this regard, the study was not consistent with existing theories (e.g. Belleflamme et al., 2014) by which nonprofit organizations may rely on numerous small investments by individuals, rather than on raising large amounts from a small group of investors.

Summary of the Findings

Coryn et al. (2009) distinguished between three levels of case-success analysis: (a) stakeholders, which in this case study were BK's executives (b) immediate impact-ees, represented by the OPMs in this case study, and (c) downstream impactees, which were defined as the OACs' audience members.

The findings show that BK's financial and human resources capitals increased after the implementation of BNK. The findings affirm Levitt & March's (1988) notion of improved organizational performance as a result of gaining experience and learning through various ways such as experiments, routines and history dependency. Moreover, the research itself relied on Levitt & March's (1988) conceptualization of *organizational memory* when data were collected though BNK's backend.

The utilization of Coryn et al.'s (2009) MSCM which includes the time-series design reduced the history and maturation threats to internal validity that derived from the single-group design. In addition, the method also endowed the research with robust methodological rigor through the inclusion of a causal role of the dependent variable (BNK) in the interrupted time series analysis.

Qualitative findings regarding participants' satisfaction show that while Bill and Jerusalemite.org are BNK's features that participants are most satisfied with, Raffle received the lowest members' satisfaction. Participants noted that the obligatory payment along with the lack of clarity and the possible non-progressive distribution of resources were the main reasons for their dissatisfaction with the feature. BK might benefit from revising the tool and considering a redirection of its support base to the public rather than to the OACs.

The analysis was conducted out of the case study approach that focuses on contemporary events, which did not require a control of behavioral events and could utilize any combination of research methods (Yin, 2003). This setting gave forth to emergence of unanticipated results. The major inference made during the narrative analysis of participants' satisfaction with BK and BNK, proposes a direction within the CS phenomenon that previous research seemed to take no notice of. Relying on previous studies, CS is defined in this dissertation, as an outsourcing of organizational function to a given online community. While the relationships and the balance between the organization and the community was noted and debated in previous studies, when scholars, such as Estellés-Arolas & González-Ladrón-de-Guevara (2012) emphasized the organization, while others, like Brabham (2013), argued that both should be equal, there is a consent in the literature that crowd members (defined as a given online community) complete tasks for the organization. However, in the case studied, I observed a different fulfilment of the phenomenon. While BK indeed uses BNK as an apparatus by which it outsources some of its functions to the crowd over the internet, the crowd members do not perceive their online activity as a work that they do for BK. Rather, they perceive their use of BNK tools as a service that they are engaged in directly for their own utility. In other words, previous studies sought to identify conditions to motivate crowd participation in the nonprofit sector based on the observed fulfillment of the ohenomenon among for-frofit organizations, that are able to offer material reward. The case studied revealed a different direction that a nonprofit may use to offer material reward to crowd members: it outsources tasks that the members perceive as their own. In this setting, crowd members are rewarding themselves.

Moreover, the analyses relied on previous studies of organizational behavior, typically involve examination of personal characteristics such as satisfaction, motivation, and notions. As discussed in chapter two, in the context of organizational behavior, the crowdsourcing approach poses ethical issues that stem generally from the rise of a new class (crowd members) which is not hired by organizations in a traditional manner. As such, the rights of such members are not anchored in laws that oblige the given organization. However, members in BK’s network retain all the rights on their work, as can be learned from BK’s agreement with all OPMs (Appendix F, section 12).

Furthermore, due to BK’s organizational structure, questions regarding hierarchy are obviated. This finding is consistent with Tolbert & Hall's (2015) notion by which organizational size is positively correlated to its differentiation, and organizational structure has influence on its ability to implement new technological solutions. Therefore, as a result of the non-presence of a hierarchical structure and chain of command, it can be expected that BK would efficiently experiment and implement new technologies.

The combination of the quantitative, qualitative and mixed-methods in this research was conducted to evaluate the impact of BNK on BK, as well as to provide documentation of empirical experience that may be beneficial for future research. This documentation may be used to assess whether the improvement in BK’s organizational capacity is a result of unique settings that occurred in a specific environment, or whether this CS apparatus is likely to have similar results when implemented by other organizations.

Chapter 5:

Summary and Conclusions

Introduction

This dissertation evaluated the effect of the implementation of a crowdsourcing apparatus on organizational capacity in the nonprofit context. Bar-Kayma (BK), a non-profit organization that provides various types of assistance for groups of artists and social activists is Jerusalem, was used as a case study. Beginning in May 2016, BK implemented a crowdsourcing apparatus named BanKayma (BNK). The primary research question presented in this dissertation was: Will BK's organizational capacity increase following the implementation of BNK? Building on organizational behavior and networks theories, as well as drawing on literature on the crowdsourcing phenomenon, three hypotheses were formulated to answer the research question: (a) BK's financial capacity will increase following BNK's implementation, (b) BK's human resources capacity will increase following BNK's implementation, and (c) BK's structural capacity will increase following BNK's implementation. The Modified Success Case Method (MSCM) which utilizes a time-series research design and allows a mixture of quantitative and qualitative methods for data collection and analysis, was used to test these hypotheses.

In the first chapter, the rationale for the study was introduced. The crowdsourcing phenomenon, the theoretical framework and the research methods were briefly reviewed, and definitions of terms used in this study were presented. It was noted that only recently has the crowdsourcing phenomenon, as defined in this study, gained scientific attention, which is typically focused on its implications for a business structures of for-profit organizations. Literature on organizational behavior theories constituted the foundation for conceptualizing organizational capacity as an amalgamation of the organization's financial, human and structural capacities.

Theoretical framework

Two bodies of literature laid the theoretical basis for this study: Organizational behavior and social networks. Additionally, organizational capacity was defined and the crowdsourcing phenomenon was reviewed.

Organizational behavior

Organizational behavior is a relatively recent applied discipline in social sciences that originated in the mid-twentieth century as a branch of economics, which focuses mainly on two areas related to organizations - the behavior of people within organizations, and the behavior of organizations in the context of their environment (Miner, 2006). This study investigated the impact that BNK had on both of those areas of BK. It was concluded that following the introduction of BNK, a new crowdsourcing apparatus, BK's capacity improved, as it provided better services to its members, who experiences, in turn, an increased income flow, and were able to reach out to a wider audience in the organization's environment.

The Goal-Setting theory, which is classified within the organizational behavior discipline, states that setting specific and non-trivial goals leads to high performance (Locke & Latham, 2002). The implementation of BNK has reformed the work of both BK's executives and its OPMs. A new, technologically based mechanism, was added to the traditional organizational approach of providing services to its clients. By that, the intention of implementing BNK posed a non-trivial goal. The research results showed that through the implementation of BNK, BK improved its organizational capacity, thus verified the main argument of the goal-setting theory.

Network Governance

In the nonprofit context, social networks reduced transaction costs, decreased uncertainty, spread norms and promoted collaborations (Jones et al., 1997). This dissertation showed that BNK allowed BK to improve its network, by facilitating more efficient mechanisms for interdependent relationships between its members, and through automation of BK's information pool, which is extensively utilized by its members to exchange resources and collaborate with each other. In that sense, BNK constitutes an online platform that allows members to generate and retain financial and operational documentation, and as such demonstrates an empirical example of Levitt & March's (1988) conceptualization of organizational memory.

The crowdsourcing phenomenon

Although crowdsourcing as a social phenomenon is not a recent one, only recently has it drawn attention from scientific scholars. The term was coined initially by Howe (2006), and its contemporary phase is manifested through online social networks, which allow interdependent relationships between actors and constitute information pools that have the potential to be utilized by participant actors (individuals or organizations) in order to exchange resources. This is an informal mechanism of give-and-take, where learning processes occur, mutual trust is constructed, and collaboration is done in practice. This study offered a concise yet comprehensive definition of crowdsourcing as an outsourcing of an organizational function to a given online community. BNK is packed with six features, each involving the outsourcing of specific functions by an organization (BK) to a given online community. Thus, each feature fits the CS definition, and BNK constitutes a crowdsourcing apparatus. The operational definition of each of BNK's features is provided in the third chapter (Table 1
The Components of BNK Crowdsourcing Apparatus).

In its contemporary manifestation, the CS phenomenon is typically utilized by for-profit organizations that motivate crowd participation through material rewards, such as prizes for a accomplishing a defined objective (Morgan, 2008). However, a research gap exists regarding potential incentives that can be proffered by nonprofit organizations to invigorate crowd participation. My intention in this dissertation was to fill some of the void, even slightly, by adding a documented empirical experience. As such, the study corresponds with previous calls for research on the conditions that make crowdsourcing initiatives succeed or fail in the nonprofit context (Brabham, 2008; Wexler, 2011). CS was conceptualized in chapter 2 as an outsourcing of an organizational function to a given online community. When viewing BK as the organization, and the OACs' members and audiences as the crowd, the results suggest that the organization has successfully facilitated crowd engagement through three conditions:

1. Relying on a history of working with the OPMs who can be viewed as the crowd's representatives in the network. In terms of network theories, those OPMs can be referred to as pivotal nodes in the network.
2. Relying on a reputation that stemmed from the organization's leadership characteristics. In the case studied, it was found that participants decided to be engaged, although they expressed critical approach and uncertainty, since they grasped the organization's leadership as innovative and trustworthy.
3. Providing CS platforms that shift some of the organizational functions to the crowd on one hand (thus reducing the organization's cost), while allowing the crowd members to increase their own utility by doing so on the other hand. In other words, both the organization and the crowd, in the case studied, are the immediate beneficiaries of the CS apparatus. I observed an equilibrium between the organization and the crowd in terms of their utility received from BNK. Previous studies debated the optimal balance between the organization and the crowd. For example, Estellés-Arolas & González-Ladrón-de-Guevara (2012) emphasized the organization, while Brabham (2013) argued that both are equally important. However, there is a consent in the literature, that in all

settings, the direction is one-way: the crowd performs tasks for the organization. Therefore, this dissertation provides a new perception of the CS phenomenon in the nonprofit context, by which a crowd member performs tasks that s/he perceive as their own, rather than for the organization. While doing so, however, they actually complete a task that was traditionally handled by the organization for that member. Future research may use results reported in this dissertation as secondary data to assess whether an optimal equilibrium exists and its proximity to the case studied here.

Organizational Capacity

The ultimate aim of the research was to evaluate BNK's influence on BK's organizational capacity. Building on Hall et al. (2003), organizational capacity was treated in the study as a composition of three organizational capitals: financial, human resources, and structural.

Financial capacity was defined in the second chapter, as the ability to maintain and improve the organization's economic base. In the third chapter, its measurability was defined by the growth of the OACs' net income. In the fourth chapter, descriptive statistics on BK's financial capacity were reported and an Interrupted Time Series (ITS) statistical model was formulated to evaluate how it was affected by BNK. It was concluded that BNK had a positive impacto on BK's income.

Human Resources Capacity was defined in the second chapter, as the ability to maintain and expand the scope of active members. Additionally, a review of social network theories was provided in the second chapter, and the concept of social-capital, as the connections among organization’s members, was introduced. Building on Dale and Newman's (2010) notion, social-capital can be evaluated by the number of individual members in BK’s network. Subsequently, in the third chapter human resources capacity was treated as social capital, which can be evaluated by the OACs’ audience size. In the fourth chapter, quantitative and qualitative data on OACs’ audience size were analyzed. Findings on changes in audience size over time since the implementation of BNK were reported. It was concluded that BNK had a positive impacto on BK’s audience size.

Structural Capacity was defined in the second chapter, as the ability to maintain and improve relationships among an organization and its members. In the third chapter, drawing on the goal setting theory, that ability was delineated as the satisfaction of BK’s members. Subsequently, an initial interview, four monthly surveys and a final questionnaire from participants were presented as instruments to evaluate the satisfaction of BK’s members. In the fourth chapter, quantitative and qualitative data on the satisfaction of BK’s members were analyzed. Findings on changes in members’ satisfaction rate over time since the implementation of BNK were reported. While quantitative analysis found evidence of improved satisfaction rate of participants with their own project, no evidence was found for a change in participants’ satisfaction with BK or BNK throughout the research period. However, a compelling qualitative analysis suggested that BK’s members’ satisfaction rate remained high throughout the research period, and that BNK apparatus was efficiently implemented by BK’s members.

Research Design

The research relied on Coryn's et al. (2009) Modified Success Case Method (MSCM), which utilizes a time-series design and combines a mixture of quantitative and qualitative techniques for data collection and analysis. Accordingly, a sequential multi-phase design was carried out with the following steps:

1. Preliminary research was conducted, which included a literature review on the crowdsourcing phenomenon and an ongoing discussion with BK’s CEO on one hand, and with my doctoral advisor on the other hand.
2. BNK was identified as a crowdsourcing apparatus that has the potential to be treated as an intervention within the organization, and time-series research was designed.
3. I received BK’s board consent to carry out the research. I also received a list with the contact details of all OPMs, as well as full access to BK’s financial records and to BNK’s backend.
4. All OPMs were approached and invited to participate in the research. I approached participants by email, and I attached the consent form (Appendix B) and an explanation of the research in Hebrew. Sixteen individuals signed the consent forms – BK’s CEO, one of BK’s board members, BK’s accountant, and thirteen OPMs. However, one of those OPMs was not responsive throughout the research period.

5. In May 2016 BNK was implemented in BK's system. In that month, I travelled to Israel and worked with BK for 30 days. Each working day (Sunday through Thursday) I visited BK's offices and shared a desk with its CEO. In addition, I visited at least one OAC every day and observed their activities.
6. During my visits in the field, I conducted interviews with participants – ten in person, three through a video call over the internet, and one through a phone call. Participants that were interviewed over the internet, were unable to be interviewed in person as they were not in Israel during May 2016. Those interviewed were conducted in June 2016.
7. From July through October 2016, a monthly survey was sent to participants. The participation rate for all monthly surveys was 33%, as five out of fifteen participants completed all four monthly surveys.
8. Data collection was completed in February 2017. Final financial records of 2016 were retrieved and a final questionnaire was sent to all participants. Fourteen of the fifteen BK participants responded.
9. In March 2017 data analyses were completed. Quantitative techniques were used to test hypothesis 1, and a mixture of quantitative and qualitative methods were used to test and explain findings related to hypotheses 2 and 3.

Overall Results

Three hypotheses were presented in order to evaluate the impact of BNK on BK's organizational capacity. In this section, the hypotheses, along with their related findings and conclusions are presented. The section ends with final remarks on the case study.

Hypothesis 1 was: Those months prior to the intervention will have lower financial capital than those months after the intervention.

BK's income was used as the testable operational definition of the organizational financial capital. Descriptive statistics on OACs whose OPMs participated in the study provided an initial assessment that the mean of the individual OACs' capacity has increased following the implementation of BNK. A further analysis of BK's financial data showed that the mean of its overall income exceeds the mean of its expenses. Additionally, BK's net income consists solely from OACs' overheads which is equal to 7% of the OACs' income, and thus the mean of the OACs' income is fully correlated with BK's net income.

Data on BK's monthly income from January 2015 through January 2017 were entered into a time-series dataset of 25 observations. An Interrupted Time Series (ITS) statistical test was conducted through the ARIMA(4,2,0) model. The analysis found no evidence to support the null hypothesis. Prior to BNK (May 2016), BK experienced a monthly increase (mean) of 313 ILS in its income. After BNK was implemented, that amount rose to about 1,000 ILS. Both periods were found statistically significant,

$p<0.05$. The essence of ITS is the account given to the time component, and it was noted that this consideration addresses the maturation threat to internal validity.

Hypothesis 2 was: Those months prior to the intervention will have lower human resources capital than those months after the intervention. Human resources capacity was treated as social capital, which, in turn, can be evaluated by the OACs' audience size. Data on OACs' audience size were retrieved from two sources: (a) participants' estimations in the final interview and final questionnaire, and (b) data mining of daily events from jerusalemite.org. These data were analyzed in two phases: (a) through descriptive statistics, tends were investigated and extreme cases were classified, and (b) an empirical phenomenology approach was used to conduct a qualitative analysis of these cases.

Based on a paired samples t-tests to detect statistical difference in the mean of the OACs' audience size pre and post BNK, the null hypothesis was rejected. Additionally, a positive statistically significant correlation was found through a correlation analysis conducted to measure the evolutionary effect of daily events on Jerusalemite.org. In accordance with the MSCM, participants' estimations on their OACs' audience size were further analyzed to identify extreme cases. Three such cases (two high and one low) were analyzed using qualitative techniques. The qualitative analysis provided further verification for the previous support found for hypothesis 1 (increase of financial capital) among OACs. The reviewed success cases linked the increased financial capacity to their experience of increase in audience size. The reviewed unsuccessful case provided a similar estimation of the OAC's audience size pre and post BNK, and was the single one that did not provide higher estimation following BNK's implementation. Furthermore, the participant noted that Jerusalemite.org provided his OAC with the means to reach out to a wider audience. Therefore, it was concluded that both quantitative and qualitative findings support hypothesis 2.

Hypothesis 3 was: Those months prior to the intervention will have lower structural capital than those months after the intervention.

In the second chapter, structural capacity was defined as the ability to maintain and improve relationships among an organization and its members. In the third chapter, in accordance with the goal-setting theory, that ability was delineated as the satisfaction of BK's members. Data on participants' satisfaction with BK were collected through the initial interview, the monthly surveys and the final questionnaire. Data were analyzed in two phases: (a) quantitative techniques were applied to identify trends and outliers, and (b) a qualitative approach was employed to analyze participants' satisfaction through presenting their experience in the form of a storytelling, followed by the researcher's interpretation.

The quantitative analysis produced no evidence of a statistically significant difference in participants' satisfaction before and after the implementation of BNK. Therefore, the analysis failed to detect and identify outliers among participants' satisfaction rate, both for the initial interview in comparison with the final question are and for participants' responses to the monthly surveys. However, the qualitative analysis provided a compelling explanation for the inconclusive quantitative findings on participants' satisfaction, by which participants satisfaction remained high throughout the research period and BNK was successfully implemented, besides one of its features, which was defined as crowdfunding initiatives. Finally, although I considered the qualitative evidence sufficient for supporting Hypothesis 3, it shall be noted that there is some ambiguity between the quantitative and qualitative findings.

The qualitative findings further suggested that Bill is the BNK feature that was implemented most efficiently. All OPMs stated that they are satisfied with Bill, use it extensively, and that it assists them in being engaged more in their areas of interest. Participants typically mentioned Jerusalemite.org as the component that they are the most excited about. On the other hand, the BNK component that participants indicated they are most skeptical about was the crowdfunding initiative. In addition, several participants expressed negative feelings in May 2016 regarding the obligatory nature of the BNK network that requires participants to pay approximately $10 a month.

The qualitative analyses revealed the degree of participants' satisfaction with BK. Most participants expressed similar assessments of BK's influence on their OACs, to the one shared by participant 12, who stated: "Working with Bar-Kayma allowed the orchestra to increase its activity tremendously. Growth is reflected in the number of concerts, in the size of the budget, and in the orchestra's ability to raise funds for its operations."

Integration of Findings and Theories

Although BK's board of directors is comprised by numerous individuals who are affiliated with the association, it is an organization operated by two individuals who hold de facto decisive authority in determining the organizational goals. As such, the goal-setting theory concept of self-efficacy (Locke & Latham, 2002) is fortified. In other words, due to their role as the organization's agenda setters, BK's two administrators can be expected to demonstrate high self-efficacy. Another implication of BK's unique structure is the insignificance of the conflict between the organizational goals to the goals of its individual members. In this regard, it might be meaningful to clarify and emphasize that the OACs are member organizations in BK's network, rather than members of BK as an organization. In other words, OACs (and OPMs) do not work for or are employed by BK.

The organizational uncertainty regarding its sources and environment, is neglected in the goal-setting theory, which implicitly assumes a clear vision of resources in the process of determining organizational goals. However, it was noted that BK's structure deploys a high degree of flexibility when handling an external environment by means of an internal structure. For example, supposing that a given OAC in the network, or a potential funder requires a certain service that was not previously supplied, BK has the ability to rapidly establish a function to handle it, given that it is in its scope of resources and interests.

BK promotes diversity among artists and social activists in Jerusalem. Multiculturalism and inclusion are two of the most prominent principles of the organization. As a result of the ongoing conflict between Israeli and Arab entities, BK faces substantial difficulty with promoting cooperation between organizations in Jerusalem. Entities that are associated or funded by the Jerusalem municipality or the State of Israel are often banned by Arab institutions. BK's scope of activity among Arab entities was limited, and expanding it is one of the organization's goals (Bar-Kayma, 2014). The organization's primary effort currently in the Arab-majority East Jerusalem is to provide assistance to mixed Jewish-Arab musical ensembles through mediation with Israeli authorities in order to issue entry visas for non-Israeli Arabs (usually Palestinians and Jordanians) for rehearsals and performances.

The network level can be analyzed through a viewpoint derived from the goal-setting theory. Throughout the research, these two approaches have converged and provided me as a researcher a theoretical basis to apply techniques to evaluate cooperation and knowledge collaboration, as well as exploring the network's rules and norms among its members.

Significance of the Research

The research applied a combination of quantitative, qualitative, and mixed-methods techniques to evaluate the empirical employment of a crowdsourcing apparatus through the utilization of measurement instruments that are derived from organizational behavior and networks theories. Thus, the significance of the study may be seen in its contribution to the documented knowledge about the empirical experience of a nonprofit organization that adopted a new crowdsourcing apparatus.

Empirical evidence. This study provides unprecedented empirical evidence of a nonprofit organization that implemented a CS apparatus (set of tools) to reform and expend its existing traditional managerial approach. Furthermore, the findings show how the organization successfully increased its organizational capacity through the implementation of that CS apparatus. In this sense, the study corresponds with previous works that identified a research gap and called for research to produce empirical evidence (Afuah & Tucci, 2012; Roth et al., 2015).

Furthermore, this study corresponded with Brabham's (2008) call for a qualitative research through interviews with individual members of a given crowd aiming to identify motivational conditions for crowd participation. It was noted that the findings show that in the case studied, online communities were formed around OPMs (who acted as nodes in BK’s network), and the utilization of the CS mechanism itself by those communities allowed BK and the OACs (defined as the crowd members) to improve their performances. As such, the development and implementation of a CS apparatus constitute the necessary conditions to motivate crowd participation. This finding contradicts previous assumptions that stemmed from for-profit models, regarding the challenges that nonprofit organizations may face, as a result of their relatively inferior capability to provide material incentives to motivate crowd participation (Afuah & Tucci, 2012; Amtzis, 2014; Bongard, Hines, Conger, Hurd, & Lu, 2013; Garrigos-Simon, Gil-Pechuán, & Estelles-Miguel, 2015).

Identification of enhanced financial models. This study aimed at evaluating the impact of a CS apparatus on nonprofit organizations. The results show that the organization studied succeeded in increasing its capacity through the implementation of the apparatus. In this regard, the research corresponded with previous calls in the literature to identify new financial models that reduce the workload of organizations while maintaining proper economic management (Carroll & Stater, 2009; Hall et al., 2003).

Strong case study. Finally, the case study organization operates in Jerusalem, a city with a social fabric that constitutes a kind of microcosm of the global society - people from different backgrounds, cultures, diverse religions and different values. Moreover, recipients of BK's services are artists and activists that come from sub-cultures on the edges of the mainstream social framework. This organizational environment poses challenges that might be greater than those that other nonprofits face. In BK's network, I observed conditions that constitute a semi-autarkic economy, where suppliers and consumers merge alternately and regularly.

Limitations

The time-series quasi-experimental design has several structural limitations, which stem from threats to internal and external validity of the research. First, the lack of a control group sets up obstacles for refuting alternative explanations for the observed phenomena. As such, history and maturation pose the most apparent threats to internal validity. Secondly, the case study approach has a lack of randomness, which reduces the ability to replicate findings, to generalize results, and to produce inferences. Thirdly, the interrupted time series model used 25 time-points, which is suffice for conducting the ARIMA, though more time-points could increase the robustness of the model. Thus, the study admittedly includes threats to external validity. However, through evaluating the influence of BNK on BK’s financial capital, the maturation threat was controlled and thus, confidence in the conclusion that the findings support Hypothesis 1 increased. Furthermore, during the qualitative analysis, attention was given to a notion that several participants pointed out: BK is unique and they predict that other organizations will adopt its framework. In this way, threats to external validity decreased.

Several limitations that are associated with the phenomenological approach apply to this study, such as a lack of randomness, a limited number of participants, generalization feasibility, influence of the researcher, replicability and the absence of a control group. It was also noted that there were ambiguities in the quantitative and qualitative findings regarding participants’ satisfaction (Hypothesis 3). Moreover, the regionality characteristic of BK (operating in one city – Jerusalem) might impair the ability to generalize results, as CS occurs on the internet, and thus can be implemented in settings that do not rely on regionality. However, to some degree, the employment of quantitative techniques addressed these limitations. Furthermore, since participants received no material incentive for participating in the research, the influence of the researcher is reduced.

Further Research and Practical Implications

Research on crowdsourcing has increased significantly in the last decade and focuses typically on for-profit structures. This study showed how a nonprofit organization that implemented a crowdsourcing apparatus has successfully increased its capacity. The case study focused on organizations that provide a set of services to groups of artists and activists that use different mediums of expressions in one city. In the third chapter, the implemented crowdsourcing apparatus was reviewed and its features were described. As such, this study can provide to entrepreneurs in other cities knowledge about the BanKayma model of Bar-Kayma, with a discrete assessment of each of its features.

Implications for the organization. The research shows that BanKayma meets BK's organizational goals and its initial expectations. However, Bar-Kayma, the case study organization, may benefit from the research by taking steps to improve the apparatus following the recommendations included in this study. While BK develops BNK's features on an ongoing basis, two main vulnerabilities were detected and the following recommendations for adjustments were proposed:

1. Raffle: Participants expressed frustration with the obligatory fee. A possible solution could include a reconstruction of the tool and redirection of its support base to the public rather than the OACs.
2. Crowdfunding initiatives: Participants expressed skepticism. One recommendation was to develop a dedicated platform rather than relying on existing ones. The platform's distinction shall take into account two objectives: (a) focusing on continuing

projects by not requiring deadlines, and (b) having no commission or fees apart from BK's overhead charge.

Implications for other nonprofit organizations. Similar umbrella organizations that seek to support groups of artists and activists in other locations may benefit from the documented empirical experience of Bar-Kayma. The study shows that this type of nonprofit organization may utilize crowdsourcing mechanisms to improve its performance. In a concise manner, entrepreneurs in the cultural nonprofit realm may learn from the research that unlike for-profit organizations, which typically provide direct material rewards as incentives for crowd participation, the case of Bar-Kayma shows that a successful crowdsourcing apparatus may be integrated within the organization's modus operandi and result in indirect material rewards. Other types of nonprofit organizations that intend to or are considering implementing a crowdsourcing approach might also find this study beneficial for understanding organizational adaptation to a new crowdsourcing apparatus in the nonprofit context.

Implications for future research. The study contributes to the literature on organizational crowdsourcing approaches in the nonprofit context by providing empirical evidence and a conceptual model for evaluating the implementation of one CS apparatus. Furthermore, BanKayma's model can be replicated and adopted by similar organizations that operate in other locations with the aim of testing and generalizing these research results. Directions for future studies could include looking at recipients of the organizations, comparing BK to other organizations, and utilizing a control group that does not receive the intervention. These endeavors may eventuate in a meta-analysis of the findings.

My dissertation did not assess the intercultural dilemma that BK is facing. Therefore, no consideration was given to whether an adaptation of CS apparatus may ameliorate the existing tension through a greater reliance on the undefined crowd rather than on government agencies. However, data collected during the research can be used to explore those facets of the phenomenon in future research. Finally, future research may evaluate the impact of a CS apparatus on trans-regional organization and compare results with the regional organization used as a case study in this research.

Final Remarks

This study examined the impact of BanKayma, a crowdsourcing apparatus, on Bar-Kayma, a nonprofit umbrella organization that serves groups of artists and social activists in Jerusalem, Israel. Bar-Kayma was used as a case study of a nonprofit organization of this type, and BanKayma was treated as an intervention in a time-series design. Bar-Kayma developed BanKayma beginning in June 2015 and has implemented it since May 2016. The research employed a combination of quantitative and qualitative methods of data collection and analysis. The research included fifteen participants from Bar-Kayma: The CEO, a board member, the accountant, and twelve project managers who represented twelve groups of artists who operate within Bar-Kayma's network. Data collection included an initial interview with all participants in May 2016 – the month that the intervention was introduced, four monthly surveys from

July through October 2016, and a final questionnaire with fourteen participants. In addition, data were collected on Bar-Kayma's monthly financial status over 25 months, from January 2015 through January 2017.

The primary research question was: Will Bar-Kayma's organizational capacity increase following the implementation of BanKayma? Building on the literature, organizational capacity was defined as a combination of three organizational capitals: financial, human resources and structural.

Hypothesis 1 was tested through quantitative methods that included descriptive statistics and an interrupted time series (ARIMA) statistical model. The results of the time-series data analysis supported the hypothesis.

Hypothesis 2 was tested through a combination of quantitative, qualitative, and mixed-methods approaches, that included descriptive statistics and the identification of extreme cases, in accordance with the Modified Success Case Method to evaluate the impact of an intervention on a nonprofit organization. The quantitative analysis found a positive statistically significant correlation between the implementation of BanKayma and the OACs' audience size. Qualitative analysis of participants' experience provided further confirmation of the quantitative findings. Finally, it was concluded that the mixed-methods analyses supported the hypothesis.

Hypothesis 3 was tested using a combination of quantitative and qualitative approaches. Quantitative analysis did not yield evidence of a statistically significant difference between participants' satisfaction with Bar-Kayma prior to and following the intervention. However, qualitative analysis led to the reconstruction of the causal relations and suggested that participants' satisfaction was high prior to the intervention and remained so after the intervention. While it was noted that there are ambiguities between the quantitative and quantitative findings, the analyses provided evidence to support the hypothesis. Therefore, it was concluded that Bar-Kayma's structural capital demonstrated stability.

Along with the support found for the previous two hypotheses, these findings constitute sufficient grounds to form a valid overall assessment, that Bar-Kayma's organizational capacity has indeed increased through the implementation of BanKayma.

Appendix A: BK's OACs Represented in the Research by OPMs

Note. The OAC's number in this appendix is different from the Participant's ID reported in chapter four under the sections on findings and analyses.

OAC	**Description**
1. Barbur ("Swan")	Joined BK: 2015 Active members: 7 www.Barbur.org A collective of artists that operate a non-commercial gallery. The gallery was founded in 2005, is recognized by the authorities, and operated within the community administration department of the Jerusalem municipality until the end of 2014. It exhibits contemporary Israeli art. In parallel to the exhibitions at the gallery there are also community activities for people in the neighborhood (Nahla'ot), such as extracurricular activities for children, halls for dance and music, and activities for the elderly. The OAC's goal is to make art accessible in the neighborhood space for people that would not normally be exposed to it. It is open five days a week. All of the events in the gallery are free.
2. Intro	Joined BK: 2015 Active members: 35 https://www.facebook.com/groups/intro.jerusalem/ A Jewish-Arab musical ensemble. Bar-Kayma is working with the authorities in Israel to issue visas and entrance permits for Arabs to Jerusalem.
3. Hamazkeka ("The Distillery")	Joined BK: 2014 Active members: 22 http://www.mazkeka.com/ Founded in 2014 as an initiative of an individual entrepreneur who contacted BK and received an initial donation. Hamazkeka provides location services and high standard technical equipment for Jerusalemite artists in the music field. It operates as a bar with a recording studio of live performances. This allows local musicians who do not intend or have access to record in professional studios, an opportunity to document, record and issue albums, and get paid for it.

OAC	Description
4. Radio Merkaz Ha'eer ("Radio City Center" / Jerusalem FM)	Joined BK: 2013 Active members: 45 jlm.fm An online radio which broadcasts four days a week from "Beita" - an art complex in the center of Jerusalem (155 Jaffa Road). The purpose of the radio is to serve as a platform for a variety of contemporary sound-art conservation in Jerusalem through exchange of musical genres and opinions, rather than institutionalized youth culture in the city. Most volunteers are content and general producers.
5. Radio Ra'ash Hour ("Noise Time Radio")	Joined BK: 2013 Active members: 20 http://raash-hour.com/ A collective of 15-20 musicians that operate as a radio station and music label that creates and provides recording and musical performance productions. They invite musicians from Israel and the world to perform and record in Jerusalem. The collective is also involved with local independent festivals in Jerusalem. They have periodic and temporary work plans.
6. Eyruvin ("Mixtures")	Joined BK: 2013 Active members: 10 http://eyruvin.wix.com/eyruvin A collective of several academics who issue a "literary file" that includes original, existing and translated works. Occasionally they collaborate with other artists (such as designers) to give added value to texts. They published the first collection in 2013. In 2015, they released a second collection and are currently working on a third.
7. Flamenca	Joined BK: 2014 Active members: 1 http://flamenca.co.il/ Flamenco School which hosts several ensembles and cooperates with Flamenco groups around the world.

OAC	Description
8. Pandora	Joined BK: 2014 Active members: 8 pandoracollective.com Puppets and objects theater. Most members are graduates of the "School of Visual Theatre" in Jerusalem. They utilize a format of multilateral development work. Some of the performances take place in living rooms of Jerusalem inhabitants.
9. StarCather	Joined BK: 2014 Active members: 35 http://starcatcher.co.il/ Work towards a large annual English musical theatre production in Jerusalem. Their shows are one of the most prominent art productions in Jerusalem.
10. Tizmoeret Harechov ("Jerusalem Street Orchestra")	Joined BK: 2014 Active members: 12 https://www.facebook.com/JerusalemStreetOrchestra Symphony orchestra that takes its concerts outside the hall and into the public sphere. Cooperates with the municipality. Carries out the "Composers' Incubator" for reworking contemporary pieces into classic style.
11. Internal Compass	Joined BK: 2016 Active members: 35 http://www.internalcompassmusic.com/#!jerusalem/tjudc The newest OAC. The project concentrates on hosting foreign musicians in Jerusalem for a master class with young people - which evolves into a performance that takes place at Hamazkeka (the distillery - OAC 03).
12. The Factory	Joined BK: 2016 Active members: 35 http://hamiffal.com/ A group of artists that has been operating in Jerusalem since 2011. In each project the group creates a temporary environment and builds infrastructure and community around a single topic. The Group's activities aim to create a place that invites the public to join the intimacy of the work process. Their current project, “Empty House”, it is an experiment that explores what a public creates the artistic action and what space grows when people are invited to express themselves out of personal interest and by connecting to a common reality and building something together.

Appendix B: Participant Consent Form

BINGHAMTON UNIVERSITY

CONSENT FORM

Principal Investigator: Ohad Shem-Tov, PhD Student.

Telephone-USA: +1 (484) 489-0360

Telephone-Israel: +972 (054) 489-0360

Investigator's Statement

The following consent form details the conditions for participation in the study entitled "Crowdsourcing in Bar-Kayma", which is being conducted as part of a PhD dissertation. The purpose of this consent form is to provide you with information you will need to decide whether or not to be in the study. Please read the form carefully. You may ask questions about the purpose of the research, what you will be asked to do, the possible risks and benefits, your rights as a participant, and anything else about the research or this form that is not clear. You can decide if you want to be in the study or not. This process is called 'informed consent.'

PURPOSE

This research study is intended to expand our understanding of how integrating crowdsourcing apparatus among nonprofit organizations may impact their performance. The goal of this research is to identify potential sources for crowd participation and to measure the influence of crowdsourcing on organizational capacity. As a case study, the research will focus on Bar-Kayma (BK), a nonprofit organization located in Jerusalem, Israel.

BK serves as an umbrella organization that provides bureaucratic services for all member organizations in its network. BK is a registered association that assists and accompanies groups of artists, professionals and specialists, and supports local and independent media. These groups comprise BK's network and are defined as Organized Artist Collectives (OACs). Participants will be comprised of representatives from each participating OAC, as well as BK's employees and board members. You were selected as a possible participant in this study because we were informed that you are a member of BK's OACs. There will be approximately 30 subjects involved in the study. The primary research question is can BK improve its performance through the implementation of a crowdsourcing apparatus?

EXPECTED DURATION OF PARTICIPATION

The research will involve 6 months of participation in and supervision of BK's organizational network. In accordance with the Pragmatic Action Research (PAR) method, which will be utilized, participants shall dynamically determine the process and evaluate the progress of the research together with the researcher. Data will be collected and analyzed during the 6-month period of data collection. During the course of the study, you will be provided with a crowdsourcing toolbox, learn to use it and be asked to complete questionnaires or be interviewed regarding your experience.

PROCEDURES

The PAR method provides you an opportunity to collaborate in the research, rather than merely being a test subject. If you decide to participate, we will conduct the research and decide on its design together. As a preliminary step, we will issue an invitation for you to participate in a two-day multilateral learning event. This event is defined as the “search conference” and all participants will be invited to participate in it. The purpose of the search conference is for participants to share their views and concerns, and produce a plan of action with the researcher. The crowdsourcing apparatus will be implemented within BK’s network, as well as its specific utilization by each OAC.

POSSIBLE RISKS

This study has been reviewed and approved by the Binghamton University Institutional Review Board. The study was found to pose no substantive risks to the participants. You, as a participant, can withdraw from the study at any time.

BENEFITS

Expected individual benefits of participating in this study include learning to more effectively collaborate, how to use crowdsourcing, and how to become an effective organization. However, we cannot and do not guarantee or promise that you will receive any benefits from this study.

PROTECTION OF ANONYMITY

This research is based on a collaborative inquiry approach, and all its participants have access to their own obtained data which will be guarded. Confidentiality will be secured through the use of assigned code numbers, rather than names or other identifying information. To comply with IRB (Institutional Review Board) regulations, the data will be kept by the principal investigator for at least three years after the study is completed. All data will be stored in a password- protected computer that only the study investigators will be able to access. Any paper or cd files of data will be stored in a locked file drawer that only the study investigators will have access to. Only the research participants will have access to their own identifiable data. The data will be in the form of transcribed text files, audiotapes, and other notes.

PLEASE NOTE:

Your decision whether or not to participate will not prejudice your future relations with the Bar-Kayma association.

Human Subjects Review Committee Statement

1. Participation in this research study is entirely voluntary. You may refuse to participate or may withdraw from the study at any time without penalty or loss of benefits to which you are otherwise entitled.
2. Any information derived from this research project that personally identifies you will not be released or disclosed without your separate consent, except as specifically required by law.
3. If at any time you have questions regarding the research or your participation, you should contact the principal investigator, Ohad Shem-Tov, who will answer all questions. His telephone number is 054-489-0360. His e-mail address is ohad.shemtov@binghamton.edu.
4. If at any time you have comments regarding the conduct of this research or questions about your rights as a research subject, you should contact the Chair of the Human Subjects Review Committee Administrator at +1 (607) 777-3818.

Subject's Statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later on about the research, I can ask the investigator listed above. If I have questions about my rights as a research subject, I can call the Chair of the Human Subjects Review Committee at (607) 777-3818. I will receive a copy of this consent form.

Subject's signature/consent: ________________________Date_______________

Appendix C: Initial Semi-Structured Interview Protocol

The Semi-Constructed interview protocol was used for interviewing all participants In May 2016 at the initial phase of the study to establish a context. In this month BNK was implemented in BK's organizational structure.

1. Tell me about your project – its history, goals and plans.
2. How would you describe the work of your project with Bar-Kayma?
3. What are your expectations and experiences with BanKayma.
4. How many individuals are involved in your project as active contributors?
5. How many individuals comprise your audience (estimate)?
6. What impact does your OAC's membership in BK have on its human resources?
7. What impact does BK's BanKyama initiative have on its human resources?
8. How satisfied are you with the following components of BanKayma? Please rate your satisfaction on a 1 to 5 scale (1 - very unsatisfied, 3 – neutral, and 5 – very satisfied) and add your comments (if any) for each component:
    A. Bill
    B. BNK Network
    C. Jerusalemite.org
    D. Mailing List
    E. Raffle
    F. Crowdfunding initiatives

Appendix D: Monthly Survey Protocol Guide

This survey was administered by email in four consecutive months to all participants from July 2016 through October 2016.

From 1 to 5, where 1 is the lowest and 5 is the highest, what is your assessment of the following points in this month compared to the previous month? If your estimate remains unchanged, the appropriate score is 3.

1. Your project activity
2. Work with sustainable
3. Bankimah's contribution to your project
4. Templites from the drive
5. Bill's payment scheme
6. Ticket sales and Internet revenues based on Crowd
7. Circle of Members and Sustainable Grants
8. Platform for security reasons
9. Public mailing list

What is name of your project?

Appendix E: Final Semi-Structured Questionnaire Protocol

The Semi-Constructed questionnaire protocol was used for collecting data from all participants In February 2017 at the final phase of the data collection.

1. What is the name of your project?
2. What is your name?
3. What is your gender? [m/f/other]
4. What is your age?
5. Does the project have a primary physical location for its activities?
6. Were there changes in project's goals since July 2016? If so, please explain.
7. Was there a change in the way the projects works with Bar-Kayma?
8. Has your familiarity with BanKayma's tools improved (including the tools Bill, Raffle, Jerusalemite.org, etc.)?
9. How would you describe BanKayma?
10. What are your expectations from BanKayma?
11. How many individuals are involved in your project as active contributors?
12. How many individuals comprise your audience (estimate)?
13. What impact does your membership in BK have on your project (financial, active members, audience size, etc.)?
14. What impact does BanKyama have on your project (financial, active members, audience size, etc.)?
15. How satisfied are you with the following components of BanKayma? Please rate your satisfaction on a 1 to 5 scale (1 - very unsatisfied, 3 – neutral, and 5 – very satisfied):
    A. Bill
    B. BNK Network
    C. Jerusalemite.org
    D. Mailing List
    E. Raffle
    F. Crowdfunding initiatives
16. Do you have any comments?

Appendix F: BK's Membership Agreement with OPMs

"It has no commander, no overseer or ruler" - *Proverbs VI*

<u>Membership agreement and project management for 2017</u>

Held in Jerusalem on: ___________________

Between:

Name: _______________________, ID No. ______________________ from: ____________________

E-mail _______________________ __________________________ (hereinafter: "**the Member**").

And:

<u>Bar-Kayma Association for Culture, Art, Music and Peace (A.N. 580450898),</u>
From Aristobulus Street 4, POB 500 in Jerusalem (hereinafter: "**the association**").

<u>It is hereby agreed between the parties:</u>

As of (date) _______________, the member will manage Project _________________ (hereinafter "the Project"), as part of the association's activities and will serve as a representative of the project and its participants with the association.

The names and positions of the members of the project are as follows:

Name	Position	Phone	Email	I.D.	Notes

1. As part of the membership in the association, the member will receive management services from the association (hereinafter: "the Management Services"). The management services will include, inter alia, handling all income and expense items of the project. The treatment will be done within the framework of a "closed

economy", i.e., only in return for income received for the project and deposited in the association's account. In principle, the association will not allow activity in the deficit or credit.

2. To clarify, the management and handling services of the income and expenses of the project shall include registration in the association's account system, receipt of funds in the bank's account of the association and execution of bank transfers or registration of checks to beneficiaries according to the member's instructions in accordance with the work procedures of the association in the framework of the program for controlling subsidies from the State budget to public institutions supported by Section 3A of the Budget Foundations Law, 5745-1985.
3. The association will assist the member in collecting funds, managing the budget, consulting in marketing, public relations, fundraising, production and execution, providing support and reporting to the authorities and any other assistance that the organization sees fit within its capabilities.
4. The member undertakes to transfer the entire project budget through the account in the association, in order to maintain an orderly report with the authorities and the Registrar of Associations.
5. The association will collect overheads of 7% of the income for the operation of the association and to improve and streamline its services. No overhead shall be levied on non-financial income such as volunteer work, equipment contribution or equivalent. If the association has raised funds for the project, the overhead will be 15%.
6. The payments made by the association to the various beneficiaries pursuant to the member's instructions are part of the management services to which the member is entitled, and for this purpose the association serves only as a service bureau.
7. In performing management services to a member, the organization does not bear financial or other responsibility for the relationship, rights and payments agreed between the member and the beneficiaries. The association is not an address for inquiries, claims or demands whatsoever on the part of the Beneficiaries in these matters, which shall be addressed to the member only. Payments made by the association to beneficiaries or to a member according to its provisions and in presenting required approvals, payments to the tax authorities as required by law shall be deducted.
8. According to the decision of the board meeting starting in 2016, a member who manages a project in the association is requested to purchase a "BanKayma" subscription for 30 ILS, according to the regulations of BanKayma.
9. In order to report on and control the activities that take place within the framework of the association, and for the purpose of publication and exposure to the general public, the project undertakes to report on events and activities through the "MessyBoat" platform on jerusalemite.org on an ongoing basis.

10. The association recommends that a member signs agreements with all other bodies with whom s/he works. The member hereby declares that s/he does not bear a legal right to sign on behalf of the association.
11. To avoid doubt, in any event, there are no employee-employer relations between the association and the members and / or all suppliers and service providers to the member despite the actual payments made by the association.
12. The copyright of the member in all of his works and productions shall remain in the hands of the member and his sole proprietorship, and he undertakes to protect the rights of all the creators and participants in the project, including the regulation of the use of the copyright of a third party.
13. The member authorizes the association to use materials related to the project, including pictures, video, text, etc. for advertising, public relations, fundraising, etc., as well as the names and characters of the participants in the project
14. For the avoidance of doubt, the management services and any other services that the association provides to the member do not include any responsibility of the association for the artistic and professional activities of the member and / or the project, or any performance related thereto, nor shall the association be responsible for the financial and financial control of the member's activities beyond this agreement. The member shall emphasize to each third party that s/he alone is responsible for all his obligations towards a third party and the association serves only as a service bureau that operates in accordance with the details of this agreement.
15. Once a month, the association will provide the member with an up-to-date state of his budget, if requested. If, for any reason, there is a surplus of expenses on income in the project's bookkeeping register, the member will be immediately asked to pay the surplus from his personal account. If there is a surplus of income over expenses on December 31, 2017, the surplus will be transferred to the next working year. In the event that the member ceases to be a member of the association at the end of the financial year, the surplus will be available to him/her for payment to various third parties in the framework of the professional activity and for payment of his/her work only, in accordance with his/her instructions, offset by other debts to the association or to a third party.
16. The member undertakes to meet the timetable as required by the association's institutions in all matters pertaining to the submission of budgets, support requests, reports and any other document that the member will be required to submit for the proper management of the organization.
17. The member undertakes to operate according to the organization's accounting procedure. The organization undertakes to respond to requests according to its abilities and in accordance with the flow of revenues of the project.
18. The member hereby declares that s/he is aware that s/he must be in continuous contact via e-mail and any other means of communication that will be agreed

upon with the staff of the association and to cooperate as necessary with the association, its staff and its institutions on an ongoing and continuous basis throughout his membership in the association and thereafter.

19. The member undertakes to attach the logo and / or the name of Bar-Kayma association for culture, art, music and peace through all means of advertising available, including advertisements in newspapers, posters, flyers, evening pages, and send copies to the association for archival purposes.
20. It has been brought to the attention of the member that the above conditions are valid for fiscal year 2017 only, and in the following fiscal year, the conditions may change, in accordance with the decisions of the Executive Committee and the General Meeting of the association.

As evidence, the parties signed of their own free will

Signed: ________________________

____

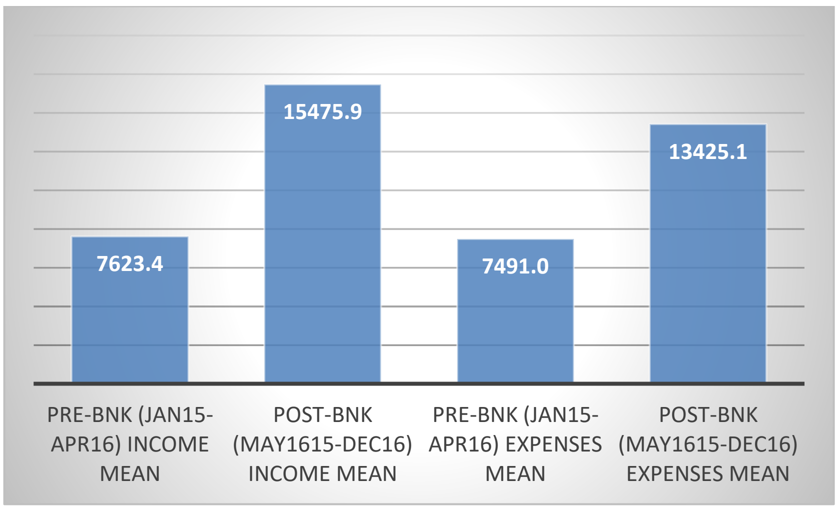
The member

The association

בר-קיימא לתרבות, אמנות, מוסיקה ושלום | ע"ר 580450898 |
Fax 02-6234285 | office@barkayma.org

Appendix G: OACs' Pre-Post Income and Expenses

Chart of the Income and Expenses Means of participating OACs



The findings show that in the months that followed the intervention, the income mean among the twelve participating OAC has increase by 103%, and the expenses mean has increased by 79%.

Appendix H: Audience Size - Phenomenological Analysis

ID	*May 2016*	*February 2017*	*BNK influence*	*Inference*
1	Several Thousand	the audience that is exposed to various activities that include 600 cultural events in several locations in the city and on the Internet, is appreciated at approximately 30,000 per year	Allows a more efficient management of funds and resources, and enables to provide grants for projects (yet small) and a right step toward independence. Additionally, we are now able to map the crowd.	**Large Increase. Attributed to BNK**
4	It ranges from 800 to 1,300 per show.	1200	Currently no effect	**Moderate Increase** **Not Attributed to BNK** Participant measure audience per show. In May the average was (800+1300)/2 = 1,050
5	It varies…. Our Facebook's group has 375 people who are familiar with the project.	1000	Probably not large, although we won the raffle. However, indirectly the existence of BanKayma allows the transfer of funds (donations, funding, etc.) which has been very helpful.	**Large increase** **Not Attributed to BNK** Participant estimated a maximum 375 followers on Facebook in May 2016. In February 2017 the same participant estimated an audience of 1000 people.
6	Thousands	About 5,000 visitors per month	Participant did not respond.	**Moderate Increase** While a reliable comparison of the

				interview and questionnaire data is not feasible, BK’s CEO has provided his informed assessment that the OAC of participant 6 experiences and increase of its audience size.
7	Several hundreds.	1000	Positive	**Moderate increase Attributed to BNK**
8	N/A	800	Currently no effect	**Inference cannot be made.** Participant did not provide relevant data in May 2016
9	Students - 10 weekly. Audience - between 10 to 50. Participants in master classes – 5 to 10.	500	Very helpful.	**Large increase. Attributed to BNK** Participant estimated an audience of maximum 70 individuals in May 2016. In February 2017 the same participant estimated an audience of 500 individuals.
10	hard to say since it is a versatile place that draws many audiences… In an average month, there are about 1,500 individuals.	2,000 people a month	Saves valuable working time. Increases performance	**Large increase. Attributed to BNK** Participant estimated an increase of 33% in the audience size.
11	there are currently about 10,000 in a month and we estimate that there	Currently it has no influence on the audience, except through the publications of events	I do not think there is currently significant influence	**No change. Not attributed to BNK** articipant indicated that the

	are 2,500 individual listeners.	in Jerusalem-ite.org		OAC has not experienced a change in the audience size.
12	In the past year, it was about 80 thousand. In addition, thousands of people were exposed to our events.	Hard to say exactly, but the radio has tens of thousands of followers in the world (150 thousand over the last year).	Laying an organizational infrastructure that increases content production and decreases engagement with bureaucracy.	**Large increase. Attributed to BNK** Participants estimated 80,000 in May 2016 and 150,000 in February 2017.
13	Participant did not provide an estimate. -- However, fieldnotes taken by the researcher suggest that the OAC's audience size in May 2016 was about 5,000.	I find it hard to quantify this data accurately. I know that in 2016 the orchestra was exposed to thousands of people who attended the concerts. --- The researcher relies on the number and nature of events, as well as BK's CEO input, and estimate that the OAC's audience size in February 2017 was about 8,000.	BanKayma and Bar-Kayma (difficult to distinguish), allow us to work effectively and to minimize the bureaucracy.	**Large increase** **Attributed to BNK**
14	Because many things happen at Barbur beside gallery exhibitions, such as lectures, events and so on, the overall audience is around 800 people a month.	Every month there is an opening of an exhibition, it is about 200. During the exhibition - another 400 a month. Besides, there are groups of at least 50 on the day, it's 250 a	There is a blurring between BanKayma and Bar-Kayma. BanKayma is the online existence of Bar-Kayma. -- When asked on the influenced of	**Large increase. Attributed to BNK** All Participants work with BNK's tools. A participants that cannot distinguish BNK tools from the traditional practices

		week and 1,000 a month. We have activities and events for at least another 20 days, it's five days a week. We have least 2000 visitors a month.	BK, participant responded: financial impact is unambiguously positive. I do not have the ability to quantify it.	that were used in BK prior to the implementation of BK, is providing evidence for the high degree of BNK's integration in BK's system. Additionally, participant did attribute increase in performances to BK, Participants estimated 800 in the initial interview and 2000 in February 2017.
15	N/A	400	I don't know	**Inference cannot be made.** Participant did not provide relevant data in May 2016Participant did not respond on this question in May 2016

Appendix I: Extraction of Responses on Satisfaction

Satisfaction with BK in May 2016. Eleven participants, [2,4,5,6,8,9,10,11, 12,13,14,], including ten out of eleven OPMs expressed their appreciation to BK, of which six [2,8,9,12,13,14] articulated their perception on BK in terms of lasting personal emotions, such as love and trust. Two participants [2,5] indicated a very strong appreciation to BK. When it comes to experience of working with BK, nine participants [2,3,4,5,6,11,12,13,14], including nine OPMs noted streamlining. Six participants [3,4,9,12,13,14] stated that they have had an experience of working with other nonprofit organizations and their impression is that BK is more efficient. Three participants [2,4,12] stated that BK furnishes its OACs with tools that are typically available to large firms. Eight participants [3,4,5,7,9,11,12,13] mentioned collaboration with others as one of the main benefits they receive from BK. Six participants [4,7,8,10,12,13] attributed to BK a financial improvement that they have experienced. Seven participants [2,6,9,10,11,13,14] argued that they have acquired organizational skills through BK, and characterized it as a system of knowledge and learning.

P2 I loved [BK's CEO] and [BK's administrative manager] for years. I consider them as the royal couple in this city…

P8 We felt that everything goes as between friends, we trusted them on a personal level and everything was fine…

P9 This is the institution I trust the most.

P13 This is not just a matter of an organization, but we are getting much more from [BK's CEO] and [BK's administrative manager] …. I am very pleased with Bar-Kayma, even on a personal level….

Ten participants expressed strong appreciation to BK:

P2 It's difficult to measure the many initiatives and projects in Jerusalem that would not happen or would have to find a harder way. Bar-Kayma's enables them.

P5 I want to say that the Bar-Kayma association is really cool and I appreciate the way they work and communicate. They are very clear. They are very helpful to us and give us a framework in bureaucracy and practical foundations for the submission of plans and budgets. All this is amazing help…

Streamlining.

P4 Prior to working with BK, the bureaucracy was a burden for us and for the organizations we worked with.

P9 There's a lot of automation. Bar-Kayma is actually a detour for creative initiatives around the establishment, bypassing the less efficient alternative of creating separate independent associations that exist only to manage these initiatives.

P11 This does not only save human resources, but also facilitates organizational order and saves time, because they have experience and familiarity beyond what can be evaluated.

P13 Before that, I had to carry on also in the role of secretary. Suddenly, after I started to work with Bar-Kayma, things happened effectively… Beyond that, the backend support in everything related to payments gives me time to engage in artistic direction.

BK is more efficient in comparison to other nonprofits:

P3 Bar-Kayma is better organized compared to other nonprofits

P14 I have experience working with traditional mechanisms. In comparison, the work with Bar-Kayma is a bureaucratic paradise.

BK is unique.

P2 I do not know of anything similar.

P3 It is the only initiative of this kind.

P9 Bar-Kayma is different in that it focuses on Jerusalem, and here the bureaucracy, the culture, the environment are so unique and – Bar-Kayma does it really well.

BK as a provider of tools that are typically accessed by large firms

P4 They furnish us with a formal body which is a nonprofit organization that allows us to put on a show which can sell tickets, pay theatre, pay musicians, and pay a lighting designers or whatever we end up paying to do the show that is necessary because we can’t do it as private citizens.

Collaboration enhancement

P3 This increases the engagement of those involved in the organization and in Jerusalem.

P5 There are many groups of artists in Bar-Kayma. We cooperate with them and expand our circle of friends in our first circuit.

P12 Bar-Kayma enables collaboration and provides channels to expand and operate

Financial benefit

P4 For us, it helps on the financial side. The interface with BK allows us not to hire people who are dedicated to do that.

P8 The name of Bar-Kayma helps us in finding and mobilizing resources.

P13 The fact is that we received this year support from the municipality and the Ministry of Culture, this is something that would not be possible without Bar-Kayma.

BK as a knowledge, learning, and information system.

P9 I attended their preparatory program where I learned about organizational management

P10 In the initial stage, we met a lot to learn to manage the organizational and financial facets of the project. Periodically they consulted with us about artistic areas.

P11 An additional side is their external consultancy. I try all the time to strengthen ties with Bar-Kayma because it allows further observation by an organization that is well-acquainted with the project and the environment. With [BK's CEO] I consult on legal issues, and with [BK's administrative manager] I consult regarding calls for proposals, fundraising, cooperation, and more. I sometimes bring up organizational dilemmas, such as relationships and interpersonal behavior with team leaders.

P11 They help in organizational learning.

P13 They are really involved in the project. It is very helpful that people with knowledge and experience are involved with everything that is happening around.

P14 From the moment we started working with [BK's administrative manager] and [BK's CEO], they taught us organizational structure and management. Therefore, everything we built was renewed in the past two years through Bar-Kayma.

BNK – Experience and Expectations – May 2016.

Satisfaction with BNK in May 2016. Eight [2,3,4,6,9,10,12,13] out of fourteen participants, including six OPMs expressed some level of familiarity with BNK's apparatus in May 2016, while three participants [7,11,14] expressed no familiarity with BNK. Three participants [4,6,9] were able to describe certain aspects of BNK, though seemed to not be informed about the apparatus as a whole. Four OPMs [9,10,11,14] did not know in May 2016 what to expect from BNK, while eight expected positive results [2,3,4,5,7,8,12,13]. Eleven participants [1,2,3,6,7,8,9,11,12,13,14], including nine OPMs have expressed excitement towards BNK. Five participants [6,8,10, 11,14] provided critical perspectives on the new apparatus as a whole, and six participants [3,5,6,8,11,12] specified crowdfunding initiatives as their main concern.

P4 First of all, I'm very impressed with the way that they automated procedures as much as they were able to, in order to leverage relatively small manpower but handle a lot of different projects. For example, when the musicians need to be paid, I send them a link to an online form which BK has set up. The musicians fill in the information in the online form and then it is handled automatically, which is a lot more efficient than having a musician call somebody and start a discussion. So, I'm very happy with the way they set it up.

P6 Everything is simple, automatic and online. It is very convenient that you can manage it all without the need for an interpersonal connection. Therefore, it decreases our need for human resources.

P10 This procedure facilitates online automatization of methods. This keeps expanding. Now it is already very beautiful. Our entire financial relations with the artists is conducted through the system. They actually interact with the system without my intervention. I only get automatic monthly reports from BanKayma and see that everything is in order…

P12 I also work with other agencies besides Bar-Kayma and I see that BanKayma tools enable efficiency and order at a much higher level.

P13 I do not need to contact them in every matter, I have everything on the drive. For example, a payment form. It seems like a small thing, but it is very influential because in the traditional way, musicians just do not do it so I have to spend a lot of time in supporting them. Now I just tell them – "send an email to Otto," and in 90 percent of cases, it's just working out. From my perspective, it's very simple, hard to go wrong and it saves a lot of time when working with musicians. The same applies when it comes to external payment demands. This is one of the most comfortable and beautiful of BanKayma's tools.

Transparent interface

P4 First I thought that there is a person called Bill.

P9 very satisfied. I suspect that [BK's administrative manager] is really the robot. But it's an amazing tool that meets all expectations

Most participants were not familiar with BNK's features in May 2016, the first month of its implementation:

P7 I know this is a project that engages a lot of people who are part of Bar-Kayma. The goal is that everyone gives a token amount and the collected monthly amount is drawn by one of the groups. It's an amazing idea that allows the groups to have more resources.

P11 Yes, but it's fairly new, so I'm still not very familiar with it.

P14 Yes, I heard of the idea. When it started I was abroad. I am enthusiastic and supportive but have not yet started working with it.

Participants didn't know what to expect from BNK – May 2016*:*

P9 All I know is that it costs 30 NIS (approximately 10 USD) a month that is allocated to one of the projects through a random drawing. It seems like a great idea, even if it is not yet fully active. For example, for us, we're not big enough to make our own subscription program, but under this program we can offer our audience a subscribing platform.

P10 I'm not sure yet.

P11 optimistic idea, an idea now

P11 If it succeeds to expand the circle, that would be good. Otherwise it would be nice but not beyond.

P12 It is essentially theoretical. Started two days ago and as a concept.

P13 At first I did not like the idea that I have to participate, but still I decided to go with it.

P13 The idea of BanKayma is still not clear to me, but I hope that in six months things will be clearer.

P14 A very supportive communion. It depends on user Friendliness

Emotional perception and trust in BK

P2 In a recent international conference of artists from around the world, we talked about seeking affordable paths for creation. We said that there is no comfort zone in Jerusalem. Here the creation is a statement in itself. I have been exposed to the activities of [BK's CEO] and [BK's administrative manager] over 9 years already. They are people who stayed here and provided a lot of support to the artistic and cultural activities in Jerusalem. More than ten years ago, prior to Bar-Kayma, they supported my ideas from the beginning, free of charge, just because they liked what I was doing. Therefore, I am always at their service and the service of those who work with them. Everything they do – Bar-Kayma and BanKayma are groundbreaking here. They help artists here to work. I do not know of anything similar.

P3 It started from a vision of [BK's CEO] and [BK's administrative manager] .

P4 We're ready to participate because they are taking the initiative on this.

P5 I see what they do within the framework of the Internet and for me it's cool that they make it available.

P7 This is a new system and I do not know much about computers, but I'm learning. It seems like a genius's idea that many people work and create common knowledge. It's charming.

P8 Not too much, but I'm in. Nice attempt to hold our own autarkic market, kind of, I did not dwell on that.

P12 Assuming I get the idea, it's the kind of thing that [BK's CEO] and [BK's administrative manager] do and I questioned them but eventually realize they were right. I trust them and wait to see how it evolves. I'm going after them with my eyes closed. I really trust them.

P13 This is my point of view, I'm sure there are a lot of things within Bar-Kayma internal that I am not exposed to.

Participants also mentioned expectation for financial improvement:

P4 The financial picture of putting on a show makes it very hard to cover costs by selling tickets, so the idea of applying for a crowdsourcing platform or for grants can be very helpful and important for us.

Excitement twoards BNK – May 2016

P3 I've heard from people who were thrilled by the idea. Jerusalem needs it.

P3 Very nice. Increasing the involvement of community members.

P6 We are trying to reach out to the tourists and the plan is to integrate it in the current project.

P7 It's an amazing idea that allows the groups to have more resources.

P8 The community is so small that anything that would strengthen it is needed. Even my friends who are physicists have heard about it and are excited.

P9 Great idea and so far, also good performance. I use it. Not familiar with a similar online platform. It will be judged in real-life. User friendliness is most important.

P11 The interface was built in a very beautiful way but is currently a pilot. There are some things that need to be changed in the system.

P12 Cool, it works by itself. I believe that soon other nonprofits will copy the technique…. It is very lacking in Jerusalem and every major city in the world. It is a smart filtering system that gives comprehensive information about what is happening. It is a smart system that knows how to generate a map of relationships within a broad cultural network within the city. it is great…. If the experiment goes well it would be amazing and if not, then it is also terrific.

P13 There is always a possibility to improve and they do it all the time. I'm very happy, but it can be improved.

Participants critique on BNK – May 2016:

P6 I cannot say, because the budgets pass through Bar-Kayma. I do not know if things would be different if they were passing through an accountant.

P6 It is oppressive that I must be part of it

P8 It is a good idea though problematic because it would be difficult to reach a wide audience.

P10 Today half of Bar-Kayma's budget comes from the project. We are the biggest project and all projects are receiving equal services, which I think is problematic. I would expect to receive more than other projects, so I'm not sure what will happen next. Without Bar-Kayma we couldn't succeed with the initial phase of the project, but now we're large enough to act independently. Bar-Kayma gets 7% overhead from each project, and for us it is actually a very high amount. If we would employ an accountant it would be cheaper for us. They do an amazing job and are the best in their field. It is the best solution for projects at the beginning of their being. For larger organizations, like us, they should come up with a cheaper contract or those projects would have to withdraw from Bar-Kayma.

P10 Maybe there is something wrong as it involves cost to participants.

P11 I know that until now they requested projects in the Bar-Kayma to pay 30 ILS (approximately $10) a month and once a month there will be a raffle that one of the projects would receive some amount. Some projects can really use this money, but I do not know what the feasibility of it, is due to the utilitarian nature of people. It may succeed or fail in the same way.

Concerns about Crowdfunding:

P3 Cannot replace institutional foundations.

P5 It will help a lot. There is “Indiegogo” and other platforms but there is a problem with existing platforms because there is a deadline for each campaign, and we have something lasting. We are looking for how to do it with Bar-Kayma’s help.

P6 I am ambivalent. In the broadest sense, it's great, but on the other hand it operates commercially, so it does not reflect the ideal form of participation.

P8 I am in favor but it can require populism. I cannot write posts on Facebook. There is a danger in an attempt to please the crowd. But this is the direction since we cannot rely only on grants.

P11 There is something too optimistic about it. Not sure it will work in Jerusalem. It can happen but not sure how.

P12 PayPal is not a great option but it is still the best. Other platforms may be packed more beautifuly, but the commission is not worth it.

Change in the work with BK – February 2017:

Satisfaction with BK and BNK in February 2017. Nine months following BNK's implementation, participants were asked whether the work with BK has changed. Three OPMs [9,10,12] responded that there was a positive change, and nine OPMs [4,5,6,7,8,11,13,14,15] reported that they have experienced a change. Participant 10, who expressed in May 2016 a sense of discomfort that stemmed from the proportion of his OAC in the network, reported in February 2017 that the issue was solved, and that he is pleased with it. Participant 9, who did not know what to expect from BNK in May 2016, reported in February 2017 that due to BNK, BK has substantially improved. A similar response was given by participant 12, who expressed excitement and expected positive results in May 2016. All nine OPMs who reported no change in their work with BK in February 2017, expressed satisfaction with BK in May 2016, thus it can be concluded that they remained satisfied.

When participants were asked to estimate the change in their familiarity with BNK, three participants [1,9,12] stated that their familiarity substantially improved. Six participants [5,6,7,10,11,13] claimed that they became slightly more familiar with the apparatus, and four participants [4,8,14,15] responded that they have not become more familiar with BNK. However, based on the ability to describe BNK's features and their experience of working with BK, it is evident that six participants [5,9,11,12,13,14] have become substantially more familiar with BNK, three participants [4,6,10] became slightly more familiar, and one participant's [8] familiarity with BK has not changed.

When participants were asked to estimate the influence of BK on their OAC, seven OPMs [4,5,9,12,13,14,15] stated that it is substantially positive, two [7,11] estimated a moderately positive influence, and one OPM argued that BK has no influence. None of the participants provided a negative estimation.

Participants were also asked to estimate the influence of BNK on their OAC. Two participants [9,12,] estimated BNK's influence as substantially positive, two [5,7] estimated a moderate positive influence, three [4,8,11,] estimated no influence, and three [13,14,15] argued that they cannot distinguish BNK from BK, and therefore they felt unable to provide estimation. Those three participants, though, stated that BK has a substantially positive impact on their OACs. Therefore, nine out of twelve OPMs estimated that BK has a positive influence on their OAC, while the other three were satisfied with the services they receive from BK, though they do not perceive the association as unreplaceable for their OACs' needs.

In May 2016, participant 4 did not have expectations of BNK, and responses suggested that most participants [5,7,9, 11, 12, 13, and 14] were not familiar with BNK.

Compared to that, in February 2017, participants 4, 5, 9, 11, 13, and 14 described BanKayma in a relatively accurate way.

P1 In the first two years we accepted projects, but then we reached our capability limit and we did not accept more projects. However, since we implemented BanKayma, we increased our efficiency and were able to support more projects, so recently we accepted several new projects, such as the "factory" and "pirates".

P4 No.

P5 There was no change, Bar-Kayma supports our project consistently.

P6 Not so much.

P7 No.

P8 There was no change.

P9 The work with Bar-Kayma was greatly improved, both because of the automation of the system, and because of the availability of [BK's CEO] and [BK's administrative manager] when automation is not enough.

P10 We separated between the bar and the artistic activity. The bar no longer operates as part of Bar-Kayma, but as a for-profit business. The cultural and community activity remained as a member project in the Bar-Kayma network.

P11 Not anything I can point to.

P12 Yes, the system has improved.

P14 No change.

P15 No.

Change in familiarity with BNK – February 2017:

P4 No.

P5 Slightly improved familiarity since we have won the Raffle.

P6 Little bit.

P7 Little bit.

P8 No.

P9 Bill has greatly improved, we won the raffle, Drive templates are improving all the time!

P10 There was neither improvement nor deterioration - everything is really good with them :)

P11 No significant change, I realized a little more about the idea of BanKayma but it has not evolved too much

P12: Yes.

P13 Little bit.

P14 No change.

P15 No.

Participants describing BNK in their own words – February 2017:

P2 A tool for multilateral support and solidarity.

P4 Centralized funding mechanism that redistributes some money, as needed, among participants in an artistic cooperative.

P5 BanKayma is the concept of uniting activists in the city of Jerusalem and mobilizing resources in favor of them by multilateral supports of individuals, collectives, and projects.

P6 An automated system for the treatment of exhausting bureaucracy.

P8 Mostly social vessel.

P9 A cool pool of collaborative resources.

P10 An automated system for online management of income / expenses of projects.

P11 It is a system that provides tools and platforms for economic management and a body that gathers artists and allows them to enjoy the benefits of shared information and cooperation, as well as the ability to maximize revenues by economic cooperation between creative agencies.

P12 An agency that provides an administrative companion for cultural activities.

P13 Partially automated system that is responsible for effective fiscal management of the project. In the past year the system expanded to a scope of community that has the ability for self-allocation of resources, managing audiences, etc.

P14 I do not use it. I use only Bill and a Drive. I've got everything I need there. I know the Raffle but do not get to use it.

Participants' estimation of of BK influence on their OAC:

P4 This would not be possible for us without Bar Kayma.

P5 Bar-Kayma's impact is unmeasurable. If I did not act under Bar-Kayma the project wouldn't exist since we would be overwhelmed by the bureaucracy.

P7 Positive

P8 Currently no effect

P9 Working with Bar-Kayma is making the project possible.

P11 It enables proper economic operation and provides an array of options and opportunities for creative activities - particularly by calls for proposals. In terms of the number of the active members in the project, the influence of Bar-Kayma is limited, since people come to the radio in various ways. Similarly, currently it has no influence on the audience, except through the publications of events in Jerusalemite.org.

P12 Developing ideas, good advice, suggestions, and basically conceptual and practical guidance from interesting and responsible people.

P13 Working with Bar-Kayma allowed the orchestra to increase its activity tremendously. Growth is reflected in the number of concerts, in the size of the budget, and in the orchestra's ability to raise funds for its operations.

P14 The impact is unambiguously positive. I do not have the ability to quantify it.

P15 They provide a lot of knowledge to me personally and to the collective…. If there was no Bar-Kayma, I can't imagine that there would be anything that could replace them. We would not be able to recruit people who would do this job.

Participants' estimation of of BNK influence on their OAC:

P4 Currently no effect.

P5 Probably not large, although we won the raffle. However, indirectly the existence of BanKayma allows the transfer of funds (donations, funding, etc.) which has been very helpful.

P7 Positive.

P8 Currently no effect.

P9 Very helpful.

P11 I do not think there is currently significant influence.

P12 Laying an organizational infrastructure that increases content production and decreases engagement with bureaucracy.

P13 BanKayma and Bar-Kayma (difficult to distinguish), allow us to work effectively and to minimize the bureaucracy.

P14 There is a blurring between BanKayma and Bar-Kayma. BanKayma is the online existence of Bar-Kayma.

P15 I don't know…. I find it hard to distinguish between Bar-Kayma and BanKayma.

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