Innovation in Performing Arts Organizations: Drivers and Performance Outcomes

By

Soheil Sadeghi Kermanshahani

A Thesis submitted to the Faculty of Graduate Studies of

The University of Manitoba

in partial fulfilment of the requirements of the degree of

MASTER OF SCIENCE

I.H. Asper School of Business

University of Manitoba

Winnipeg

Abstract

This study aims to expand the Operations Management field's discourse to recognize the idiosyncrasies of not-for-profit performing arts organizations (PAOs) and how they can survive and achieve their ultimate goal, i.e. providing products/services to improve and benefit a community and the broad public interests. In doing so, we consider innovation as a strategic weapon in addressing PAOs' increasing need for improvement in their operating structures and performance outcomes. Particularly, we determine the drivers of innovation in today's PAOs and explore how innovation in both products and services can affect their financial, artistic, and social performance. Drawing on the theory of dynamic capabilities and based on a systematic literature review, four major internal capabilities are identified that can enhance PAOs' level of product and service innovations: Environmental Intelligence, Internal Integration, Core Operational Capability, and External Partnerships and Collaborations. A survey targeting top managers from a random sample of North American orchestras is conducted to empirically validate our conceptualization of the PAO Innovation and examine the proposed conceptual model. The results indicated that every capability significantly enhanced at least two innovation dimensions. Moreover, product and delivery innovations were positively influential on artistic performance and ultimately, financial performance.

Keywords

Arts Organization, Service Innovation, Product Innovation, Dynamic Capabilities, Performance

Acknowledgements

I wish to express my gratitude to my advisor, Dr. Sara Hajmohammad for her directions and encouragement throughout my studies in the program and in all stages of this thesis. I sincerely thank my committee member, Dr. Bruno Silvestre for his recommendation of the area of the research and his feedbacks. I also thank my other committee member, Dr. Nathan Greidanus for his valuable suggestions.

Table of Contents

List of Tables

List of Figures

1. Introduction

Canadian not-for-profit (NFP) organizations comprise more than 13% of the country's economy, with over CAD 240B annual turnover. Their 2015 unearned incomes from federal, provincial, and municipal governments totalled more than CAD 160B, CAD 6.8B of which was from federal funds. Particularly, Canada Council for the Arts paid more than CAD 158M to arts organizations via different funds, grants, and other programs in 2017 (Blumberg, 2018; "Stats and Stories 2017-18 Canada Council Funding Overview", 2018). In the US, tax-filer NFPs spent a total amount of USD 2.45 Trillions in 2014, USD 49B of which was the share of arts, culture, and humanities sector (Morris et al., 2018). Also, The National Endowment for the Arts' budget was more than USD 152M in 2018 (National Endowment for the Arts Annual Report, 2018). Given that governmental funds comprise only part of the performing arts organizations' (PAOs) sources of income, we can appreciate the significance of economic turnover in this sector.

NFP PAOs are tax-exempt organizations with special institutionalized governance, financial and operational structures, which are undergoing a gradual process of change and restructuration due to the shifts in their external environment (Glynn, 2002; Glynn & Lounsbury, 2005). On the one hand, participation rates for performing arts, especially in traditional forms (e.g., classical music, musical theatre, and ballet) has declined among the American population, and most noticeably the younger generations and highly educated individuals (DiMaggio & Mukhtar, 2004). The number of Americans who attended at least one occasion of art performance or visited an arts museum during a year decreased by 5.6% between 1982 and 2012. More specifically, the number of attenders dropped by 2.8%, 1.1%, 1.1%, 1.9%, and 4.0% in classical music, ballet, opera, musical, and non-musical play events respectively (NEA office of research & analysis, 2013). In the period after the recession (i.e., 2010 to 2014), the overall audiences for orchestra performances

decreased by 10.5%, similar to the drop in the overall performing arts field audiences (Z. G. Voss, Voss, & Yair, 2016).

On the other hand, scarcity of the means of unearned income is another significant part of the problem. Total available funds from the National Endowment for the Arts (NEA) − the main source of the federal funds for arts and cultural organizations in the US − declined by more than USD 19M between 2009 and 2017 (i.e., 10% decrease) (NEA office of public affairs, 2011, 2019). Given the direct and indirect relationship between grants provided by NEA and other sources of income in arts sector (e.g., matching grants, donations, and earned revenues), the drop in PAOs' and other cultural organizations' revenues is anything but negligible (Weinstein & Bukovinsky, 2009). To illustrate, it is noticeable that foundation giving stayed almost the same during 2000-2010 period, whereas corporate giving had a 60% decline (NEA office of research & analysis, 2012). Additionally, while appropriations to the NEA shows an increase of USD 50M between 2001 and 2012, appropriations to state arts agencies, the major sources of governmental funds, decreased by approximately USD 200M (i.e., beyond 40%) over the same period. There has also been remarkable law-enforced recessions and eliminations in terms of several state arts agencies as of the beginning of the millennium. As an instance, all state funding for the Kansas arts commission was cut in 2012 and the agency was eliminated the next year (NEA office of research & analysis, 2012). In addition, while some PAOs' revenues might have increased over time, their expenses have increased drastically, threatening their sustainability and survival. By way of example, Metropolitan Opera experienced 83% and 20% upsurge in their amount of contributions and box-office revenues between 2000 and 2009; however, a 60% increase in their total expenses and 55% in compensation costs led to a huge loss in 2008 and a USD 72.6M decline in their total assets in 2008-2009 period. Also, Chicago Symphony Orchestra announced a USD 15M deficit

for 2009-2010 period. Other organizations have also undergone budget and salary cuts, as well as plan eliminations to compensate losses and prevent deficits ("The death of classical music in America," 2011).

Not only funding organizations expect more accountability and effectiveness on the part of PAOs in spending their rare resources, governmental agencies, themselves, are under excess pressure for wise and cautions dissemination of the public resources. Nevertheless, some political forces call for the necessity of NFP organizations' competing with for-profits or even doubt the benefits of publicly-funded arts for the society (Weinstein & Bukovinsky, 2009). Hence, PAOs are increasingly urged to become self-dependent and to meet the broad range of their diverse stakeholders' expectations. Innovation is known to be one of the best strategic weapons for PAOs to cope with such changes in their institutional environment and to improve their effectiveness and performance, not only through absorbing greater and more diverse populations to art performances, but also by better communicating the merits of the organizations to the public and politicians, as well as by better supporting the main operations through more robust supporting activities (Bakhshi & Throsby, 2009; League, 1993; Tepavac, 2010).

Yet, the extant operations management literature is predominantly and exclusively saturated with studies on for-profit organizations and how they operate, typically with the explicit aim of increasing their profits (Olson, Belohlav, & Boyer, 2005; Pagell, Fugate, & Flynn, 2017). The not-for profit organizations, however, have received little attention despite the fact that they are quite different in terms of their resources, motivations, governance structures, and operating practices (Rodríguez, Giménez Thomsen, Arenas, & Pagell, 2016). In line with the recent calls for filling the gap in the literature on not-for-profits and NFP PAOs specifically, this study aims to shed light on these organizations' idiosyncrasies and the ways through which they can survive and achieve

their ultimate goals by answering three main questions: (i) what is PAO innovation from an operations perspective? (ii) what are the drivers of various types of innovation in PAOs? And (iii) does innovation in PAOs improve their performance?

Arts management literature has broadly considered innovation in NFP PAOs from a purely "artistic" perspective (DiMaggio & Stenberg, 1985; Kremp, 2010; G. B. Voss, Montoya-Weiss, & Voss, 2006) and only few studies have taken other aspects of innovation into account (Camarero & Garrido, 2008b; Castro-Martínez, Recasens, & Jiménez-Sáez, 2013). This study contributes to the literature by taking a holistic operational perspective and defining PAO innovation as any incremental movement towards change (Camarero & Garrido, 2008b) along two dimensions: product and service. Product innovation refers to performing unconventional and new artworks (content) or new approaches in performing already-presented pieces (artform) with novel techniques, interdisciplinary forms, etc. (Bakhshi & Throsby, 2009; Brown, 2004; Castañer & Campos, 2002). Service innovation, however, is categorized into two types: service delivery innovation and new service development. Service delivery innovation refers to the changes in the services which are provided alongside the main product as well as the modifications to the processes and points of service delivery. New service development, on the other hand, is attributed to introducing new types of educational, cultural, or social services which do not contain a show element and aim at fulfilling the needs of stakeholders beyond those who attend the shows (Hume & Sullivan Mort, 2010; Hume, Sullivan Mort, Liesch, & Winzar, 2006; Menor, 2015; Scheff & Kotler, 1996a).

Drawing on the theory of dynamic capabilities (Teece, Pisano, & Shuen, 1997) and based on a systematic review of the literatures on NFP organizations, professional services, and arts management, we identify a set of PAOs' internal capabilities as the major drivers of product and

service innovations and discuss how the innovation enhancements affect PAOs' financial, social, and artistic performance. These capabilities include environmental intelligence, internal integration, core operational, and partnership and collaboration. A survey methodology was conducted to examine the validity of the developed measurement scales and the conceptual model. Complete questionnaires were received from 98 North American (Canada and the US) NFP orchestras. The results support the applicability of dynamic capabilities theory to not-for-profit sectors such as PAOs, in which the organizations do not compete against each other. Specifically, we conclude that to remain innovative and perform well within moderately-volatile environments, such organizations should mimic their most resourceful and prominent peer organizations (Eisenhardt & Martin, 2000).

This thesis will proceed as follows: Sections 2 and 3 briefly describe the current situation of PAOs and innovation in those organizations. Sections 4 and 5 provide the theoretical background of the study along with our proposed conceptual model. Section 6 explains the methodology, analysis and results. We conclude the thesis and discuss the contributions and limitations of the study in Sections 7 and 8.

2. Performing Arts Organizations

From an operations perspective, PAOs can be categorized as hybrid organizations on the product-service continuum (Oliva & Kallenberg, 2003). If we take service as the event or medium through which the product is delivered (Mechling & Little, 2000), PAOs' core service would be the medium through which their product, e.g. their shows or concerts, is delivered to the customers (i.e., the audience) and the customers are somehow involved in and interact with the service delivery process (Sampson & Craig, 2006). Besides, PAOs may also provide services which either may not involve a show element (such as education programs) or may contain variations of it in

which the traditional roles and concepts are widely challenged (such as youth orchestra programs where the border between artists and consumers is dimmed).

The NFP nature of the business in North American PAOs has resulted in their unconventional business models and governance structures during the last century. While they are partially funded by federal, state, and local governments, they maintain their financial stability through private corporate sponsorships and public donations ─ mostly motivated by government tax-deduction programs ─ as well as their earned incomes from subscription fees and ticket sales (Weinstein & Bukovinsky, 2009). However, with the decrease in their governmental funding and graying of their audiences which are also shrinking in number, the PAOs have been experiencing a state of great turmoil and change over the past three decades (DiMaggio & Mukhtar, 2004). While some tend to ascribe the falling ticket sales to the shift in artistic taste from 'high art' to 'pop art', others attribute it to the emergence of an omnivorous audience with a general tendency toward works of art with diverse ethnic, cultural, and societal roots (Peterson, 1992; Peterson & Kern, 1996).

Besides, PAOs are facing new struggles to compete with entertainment sector which is already benefiting from the new advanced technologies as an innovation source as well as for-profit sector's operations and project management know-how to achieve more effectiveness and efficiency. At the same time, they need to absorb and retain new audiences by means of diversifying their target segments, reaching out to the public, and deepening their relationship with serious art audiences (Bakhshi & Throsby, 2009). Given these conditions, we could say that PAOs are currently operating within a moderately volatile environment in which their existing competencies are deemed as ineffective (Glynn, 2000, 2002) and therefore, they are under an increasing pressure to develop new capabilities for survival (Hume et al., 2006; Scheff & Kotler,

1996a; Tepavac, 2010).

In doing so, PAOs attempt to pursue strategies that are already adapted and proved to be successful in the for-profit sectors. For example, they increasingly aim for both effectiveness (in terms of their organizational goals and objectives) as well as efficiency (in terms of their internal processes and resources) in order to become economically sustainable (Weinstein & Bukovinsky, 2009). They also attempt to become more accountable to their funders and supporters by concentrating on issues like public value creation, social inclusion, and diversity (Jancovich, 2015). The arts management scholars, on the other hand, have developed measures, methods, and management knowledge to enhance the administration and governance of the arts organizations (Evard & Colbert, 2000).

These, in turn, have heated the debate over two conflicting logics in PAOs: the art logic symbolizing the perspective of artists in commitment to producing "the works of art, for the sake of art itself" and the managerial/market logic promoted by funding bodies and supporting associations' tendency toward formalization, accountability, and effectiveness (Glynn, 2000, 2002; Glynn & Lounsbury, 2005). In other words, the existing model of producing in a vacuum and increasing the revenues solely by means of marketing activities does not seem to be effective anymore. To adapt to the new "cultural consumption" context (Peterson, 1992; Peterson & Kern, 1996), PAOs are in need of innovative business models for their production and service delivery more than ever (Tepavac, 2010).

3. Innovation in PAOs

A "… rather broad, conventional definition of innovation [considers it] as the adoption of means or ends that are new to the adopting unit" (Downs Jr. & Mohr, 1976). Speaking in the realm of management disciplines, while "adopting unit" in the above definition represents any

organization or institutionalized order (Van de Ven, 1986), other restrictions to this definition have been the sources of academic disputes since the inception of the innovation concept in 1960s. First of all, although all scholars are in agreement that the new idea should be implemented or utilized within the organization, whether it should also be generated there (Thompson, 1965) or simply adopted (Downs Jr. & Mohr, 1976; Rowe & Boise, 1974) remains controversial. The most important controversy in this regard, however, is over the 'originality' of the innovation: some researchers believe that only first or early use of an idea by one or a set of similar organizations could be regarded as an innovation (Becker & Whisler, 1967), whereas others believe that any new idea to an organization is an innovation (Damanpour & Evan, 1984; Downs Jr. & Mohr, 1976; Van de Ven, 1986). Moreover, some researchers have proposed that innovations are new ideas developed without the innovative organizations being under pressure by external forces, and that innovations are generated due to wise prediction of future needs (Rowe & Boise, 1974); however, a more approved opinion in this regard is that innovation could be an answer to changes in the external environment as much as it could be an action aimed at changing the environment (Damanpour, 1988, 1991). Finally, it is frequently stated that new ideas are considered as innovations only if they are accepted at the organizational level and lead to success (Downs Jr. & Mohr, 1976; Kimberly & Evanisko, 1981).

The question of kinds of new ideas which can be regarded as innovation is perhaps the most important issue in terms of the definition of innovation. The answer to this question is that almost every aspect of organizational affairs has been studied as site of innovation: from products, services, and processes to procedures, rules, norms, techniques, programs, and organizational forms. A useful categorization in this regard is that innovation could be divided into technical and administrative types. Technical innovation is comprised of product, process, and service

innovation; basically, all aspects of organizations' main processes. Administrative innovation, on the other hand, encompasses changes in organizational structure and administrative processes; in one word, managerial issues (Damanpour, 1988; Kimberly & Evanisko, 1981).

Assuming that innovation is beneficial for adopting organizations, research on innovation has been aimed at ascertaining the conditions under which organizations can become innovative and/or better and more successful innovation would happen. The organizational outcomes of innovation have also been of great importance in this regard. However, many studies on innovation has brought about controversial or incompatible results. Researchers therefore argue that attributes, adoption processes, and drivers of different types of innovation might be moderately or quite distinctive (Damanpour, 1988; Downs Jr. & Mohr, 1976). As a result, it becomes of great importance to develop valid dimensions over which innovation could be categorized into different types, as this can lead to a sound theory of innovation. Some researchers even believe that the typologies of innovation, rather than the theoretical standpoints, precede the definition of innovation in scholarly works (Harmancioglu, Droge, & Calantone, 2009). In other words, researchers decide upon what is or could be an innovation before proceeding with a definition.

Many typologies of innovation have been introduced until today. A single problem with all attributes over which those typologies are built, however, is that they are secondary (i.e., non-intrinsic) characteristics categorization of innovation based on which depends on the situation of the adopting organization and/or the perception of the subject. All that said, one of the first dimension over which innovation can be categorized is the scope or "the amount of organizational and/or societal space, i.e., activities and interactions, affected (Rowe & Boise, 1974)" by implementing it. This can also be referred to as major versus minor innovation (Downs Jr. & Mohr, 1976). In the same vein, innovation has been categorized into high-cost/low-cost,

simple/complicated (based on communicability), means (ultimate)/ends (instrumental), and problem/slack-induced (Downs Jr. & Mohr, 1976; Rowe & Boise, 1974). It is also suggested that the stage of adoption (i.e., initiation, implementation or diffusion) should be considered when studying innovation (Damanpour, 1988, 1991; Kimberly & Evanisko, 1981).

Perhaps one of the highly suggested typologies of innovation is based on the degree of change or magnitude of effect, upon which innovation can be categorized into incremental versus radical types. This characteristic, often labeled as the radicalness or characteristics of innovation, indicates whether or not a fundamental change or clear departure from the existing practice has happened. In this regard, it overlaps with routine/radical, variation/reorientation, discontinuous, breakthrough, and disruptive concepts in innovation typology (Damanpour, 1988; Downs Jr. & Mohr, 1976; Gatignon, Tushman, Smith, & Anderson, 2002; Harmancioglu et al., 2009; Henderson & Clark, 1990; Rowe & Boise, 1974). Henderson and Clark (1990) introduced two concepts of architectural and modular innovation, where the former alluded to radical changes in the way the components of a product are connected, and the latter pertained to radical changes in the design of the components. Proposing a rather extensive framework for typology of innovation Gatignon et al. (2002) suggested that product complexity (i.e., the number of subsystems), hierarchical locus of change (i.e. core versus peripheral change, that is, where the alteration has happened in the structure), type of change (i.e. generational (modular) versus architectural), and characteristics of change (i.e. radical versus incremental, competence-enhancing versus competence-destroying) should be taken into consideration.

There is a well supported notion among researchers contending that different typologies should be suggested for service innovation, due to intangibility and other different characteristics of service offerings, compared to products. Approving this idea, den Hertog, van der Aa, and de

Jong (2010) proposed a six-dimensional model indicating possible types of service innovation which can occur in a business both individually or in combination; i.e., their conceptualization is focused on the locus of change in service offerings: (i) new service concept of offering (i.e., new value created by service provider in collaboration with customer), (ii) new customer interaction (i.e., new role played by customer), (iii) new value system or set of business partners who are involved in service co-creation, (iv) new revenue model (i.e., new methods of distributing costs and benefits among co-creators), (v) soft components of new delivery system (i.e. personnel, structure, and culture), and (vi) technological component of new delivery system. Adopting a different perspective and drawing on the service-dominant logic, Paswan, D'Souza, and Zolfagharian (2009) introduced their eight-cell typology of service innovation, comprised of three dimensions: perceived environmental uncertainty (high or low), service firm's strategic orientation (cost control or differentiation), and managers' market orientation (market or firm focus). The result is four incremental and four radical service types.

Similar to other creative businesses, innovation is a crucial and essential part of PAOs' existence from administrative and governance processes to their operations, products, and services. A broad view to arts and cultural businesses suggest that innovation may occur within four processes in these organizations: (i) audience reach such as technological enhancements for absorbing new audiences or providing additional online materials to heighten the depth of audience engagement, (ii) artform development, for example producing programs with novel and unexperienced structure, (iii) value creation, for example measuring and translating the value of their contributions to audiences and society to terms that are clear and unambiguous for concerned stakeholders such as funding bodies, and (iv) organization and governance including novel methods in strategic management, marketing, fundraising, and administration or new business

models for NFP arts organizations (Bakhshi & Throsby, 2009; Vakharia & Janardhan, 2017).

A more concise view to innovation in cultural organizations, as part of the NFP sector, often considers it as incremental and continuous improvements either in terms of enhancing the audience experience, service delivery, and interaction methods through adoption of new technologies from for-profit sectors, or as managerial changes aimed at enlarging the customer base (Camarero & Garrido, 2008b). For example, innovation in Brown's (2004) study includes a number of concert enhancement strategies such as dramatization, visual enhancements, and embedded interpretations. Empirical studies in arts management and public policy, on the other hand, have often been focused on artistic innovation in PAOs, that is the degree of novelty in the content or artform of the artistic products (Castañer & Campos, 2002). These studies mainly investigate the degree to which the PAOs' programming diverges from the conventional repertoire compared to one another (Bhansing, 2016; DiMaggio & Stenberg, 1985), as well as the effect of various contextual factors on artistic innovation (Cancellieri & Turrini, 2016; Pierce, 2000; Pompe & Tamburri, 2011; Tamburri, Munn, & Pompe, 2015).

From an operations perspective, however, innovation is broadly defined as "… the implementation of new ideas or changes, big or small, that have the potential to contribute to organizational (business) objectives" (Schroeder, Scudder, & Elm, 1989, p. 6). It is mostly categorized based on three dimensions: (i) where the change happens in the operations processes or in the value chain, (ii) the reference point/level of analysis for evaluation of the change, and (iii) magnitude/effect of the change (Gatignon et al., 2002). To provide a broader and encompassing conceptualization, we integrate the arts management and operations management perspectives and define PAO innovation, in terms of what these organizations have to offer, as "***any incremental or radical change, compared to the PAO's past situation, detected throughout the entire value***

chain of design, production, and supporting of its products and services". Given these specifics, PAO innovation can be classified into two categories: *Product* and *Service Innovation*.

It should be noted that these categories are not mutually exclusive since many PAO innovations might involve some degrees of change in both product and service, as is the case with children and family concerts. However, for the sake of conceptual parsimony, we separate and distinguish them based on the locus of the change.

3.1 Product Innovation

Product innovation (PI) refers to the incremental or radical changes in either or both the *content* and *artform* aspects of PAOs' cultural products. Innovation in content refers to the degree of originality, novelty, or rarity of the presented artworks. Taking orchestra field as an example, programming more recent or less performed pieces is considered a product innovation, in terms of the content. This could fall anywhere on the incremental-radical continuum, depending on the frequency and degree of the unconventionality: simply including few contemporary pieces in the seasonal program might be less radical compared to presenting a new music festival week, commissioning composers, or world premiering contemporary compositions.

Although cognitive boundaries of content and artform are blurred, basically due to their interactions, artform innovation could be simply defined as novel approaches to presenting known works of art, as well as incorporating new technologies and artistic and communicational techniques in the performance process (Brown, 2004). Similar to content innovations, artform innovations could also vary on the incremental-radical continuum. For example, adding textual or oral interpretive and educational materials and sections to the classic series might be rendered as incremental compared to addition of dramatized or visually-enhanced series.

3.2 Service Innovation

Our conceptualization of service innovation (SI) includes two types of change: *delivery innovation* and *new service development*. Delivery innovation refers to changes in (i) the peripheral services which facilitate and accommodate the delivery process of the main service/product– the show, or (ii) the service delivery points, delivery process, and medium through which the main product (i.e., the show) is delivered (Andreasen & Belk, 1980; Hume, 2008; Hume et al., 2006; Menor, 2015; Scheff & Kotler, 1996a). Scheduling versatility, improving accessibility and facilities, adding supplementary services (e.g., culinary and beverages, parking, accommodations, backstage meetings), and touring, as well as diversifying venues and concert locations are examples of incremental service delivery innovations. Some service delivery innovations, however, could include radical changes. By way of example, BBC Proms' innovative alteration in the venue by removing the chairs and freeing some space and allowing the audiences to freely move during the performances drastically changed the architecture and social concept of the service with significant effects on the demography and attendance rates (Mencarelli & Pulh, 2006). Another example of radical changes of this type is the Berlin Philharmonic's digital concert hall which facilitates live streaming of the concerts for the subscribers.

New service development, on the other hand, is attributed to development of new services, which often do not contain a show element and are basically aimed at fulfilling educational, cultural, and social needs of the society or the attenders. Education programs are an example of new services developed due to PAOs' artistic and cultural diffusion goals. Such new services are generally considered as incremental actions for effective deployment of PAOs' resources; however, the sophisticated design and implementation of some of these programs can immensely elevate the magnitude of their impact; hence, rendering them as breakthrough innovations (e.g., El

Sistema projects by Los Angeles Philharmonic and Winnipeg Symphony Orchestra).

4. Drivers of PAO Innovation

As discussed earlier, the literature on PAO innovation is mainly focused on the content or artistic innovation as part of the PAOs' responses to external (Cancellieri & Turrini, 2016; G. B. Voss et al., 2006) and internal risks (G. B. Voss, Sirdeshmukh, & Voss, 2008). From this perspective, innovation is a risky strategic choice aimed at fulfilling the expectations of arts-enthusiasts and artists at the expense of rare organizational and public resources. However, arts practitioners and consultants view innovation as a strategic weapon for balancing different commitments of PAO's mission statements and sustaining their viability. While PAOs have been trying to adapt to the new circumstances of the environment by adding and developing new supporting activity divisions, new routines, and taking advantage of managerial expertise where their available resources allow, not all of them have been able to maintain their viability and effectiveness. Nurturing new capabilities as bundles of organizational routines, we believe, is the key for these organizations to encounter their modern situation by developing innovative products and services.

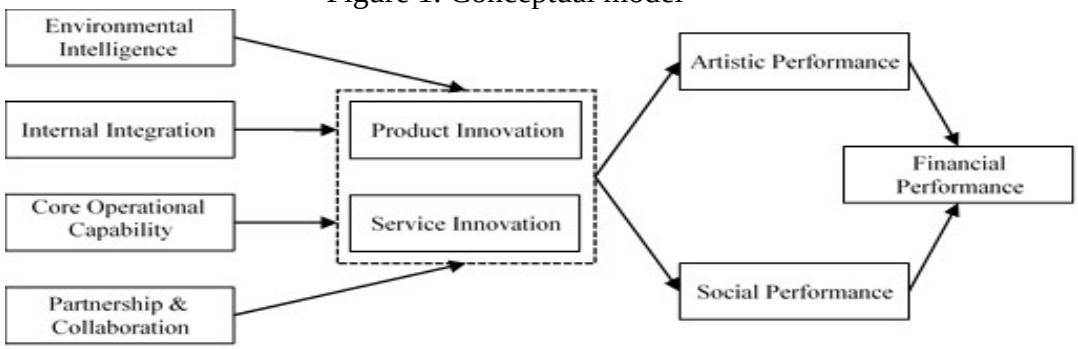
According to the theory of dynamic capabilities, to gain and retain competitive advantage, organizations need to have the capabilities required to detect and adapt to the abrupt changes in their market and environment (Teece et al., 1997). While the relationship between the dynamic capabilities and reacting to changes in the external environment through innovation implementation is well-established in the theory and widely used in studies on both products and services (den Hertog et al., 2010; Kindström, Kowalkowski, & Sandberg, 2013), the theory remains underutilized in NFP sectors. To the best of our knowledge, very few studies and quite recently have adopted the RBV or the dynamic capabilities theory to NFP organizations and

practices. Sanzo-Perez, Álvarez-González, and Rey-García (2015) found that internal market orientation and information and communication technology competence had positive effects on different types of social innovation and performance outcomes in a sample of NFPs and charities in Spain. Drawing on Teece's (2007) proposed conceptual model, Vézina, Ben Selma, and Malo (2018) explored the effects of sensing, seizing, and reconfiguring capabilities on social innovation and NFP entrepreneurship activities of a large for-profit business. Adopting an RBV lens, another study by the same authors on the same case illustrates how capabilities nurtured for social entrepreneurship purposes can lead to organizational innovations (Vézina, Malo, & Ben Selma, 2017). Studying the positive and negative effects of business-NFP partnerships, J. M. Sanzo, Álvarez, and Rey (2017) used dynamic capabilities to better uncover the microprocesses of organizational learning and nurturing capabilities in NFPs partnering for-profit businesses. Rey-García, Calvo, and Mato-Santiso (2019) used dynamic capabilities to investigate the role of organizational resources and coordination in creating competencies towards social innovation within cross-sector partnerships. Finally, using several cases in tourism and hospitality, Sigala (2016) proposed a framework to identify three capabilities of network structure, market practices, and market pictures which can enable social enterprises to better co-create social value and promote change.

Moderately volatile environments are markets wherein threats to organizations' competencies are merely from the side of external contingencies. Although these changes in the environment might happen frequently over time, they are roughly predictable and follow a linear path so that the structure of the industry could be rendered as stable. The result is that both the boundaries of the market and the external stakeholders and rivals remain well known and detectable to internal stakeholders and decision-makers (Eisenhardt & Martin, 2000). In

moderately volatile environments, such as that of PAOs', organization's dynamic capabilities are mostly reflected in the operational 'best practices' they follow to generate, combine, and reconfigure their internal/external resources, so that they can innovate and provide new products and services (den Hertog et al., 2010; Deshpande, Farley, & Webster, 1993; Eisenhardt & Martin, 2000; Harmancioglu et al., 2009; Hitt, Xu, & Carnes, 2016). Specifically, while few PAOs with adequate financial resources and artistic merits might take the leap to implement breakthrough innovations and implement highly ambitious projects to stay ahead of the game; many others gradually mimic the best practices and create new capabilities to stay in the game. They draw on their artistic and technical qualities and their social capital to reconfigure their operations with more recently-generated internal and external routines/resources or create incremental innovations in various aspects of their products and services.

Figure 1. Conceptual model



In this study, based on a systematic review of the NFP organizations, professional services, and arts management literatures, we put forth a bundle of capabilities (Figure 1) which significantly drive innovation in PAOs, as discussed in the following sections.

4.1 Environmental Intelligence Capability

As depicted in the classical PAO value chains (Preece, 2005; Stockenstrand & Ander, 2014), there is traditionally a unidirectional flow of information from PAOs toward their environment,

specifically their audiences (DiMaggio, 1982a, 1982b). Given the recent shifts in the arts logic discussed in Section 2, this view seems to be expanding recently to address the role of the audiences in co-creation of the art, the public value creation, and the diversity and social relevance concerns (DiMaggio & Mukhtar, 2004; Jancovich, 2015; Mcphee, 2002; Peterson, 1992; Peterson & Kern, 1996).

Environmental intelligence capability (EIC) generally refers to the organizations' continuous acquisition and assimilation of information regarding their external environment and its transformation into a stack of relevant knowledge to be used as the basis for their responses to the environmental changes (Cadogan & Diamantopoulos, 1995; Kohli & Jaworski, 1990; Kohli, Jaworski, & Kumar, 1993; Narver & Slater, 1990). In particular, the external information in a for-profit sector includes the current and future needs of the customers, the current and potential strengths, weaknesses and strategies of competitors, and the changes in the technological and other environmental and contextual elements (Cadogan & Diamantopoulos, 1995; Narver & Slater, 1990). Due to the lack of a direct intra-industrial competition in the NFP sector, however, this concept can be applied to PAOs by focusing on the strategies and best practices of peer organizations or those recommended by professional associations rather than the competitors (G. B. Voss & Voss, 2000; Z. G. Voss & Voss, 2000). Moreover, responsiveness towards a more inclusive set of stakeholders rather than only the clients should be considered (Camarero & Garrido, 2008a, 2008b; Sorjonen, 2011). This dynamic capability, as the first step in any organizations' environmental adaptability (Cohen & Levinthal, 2000), is path-dependant and highly relies on the prior level of organization's knowledge and familiarity with the area of interest.

Accordingly, we define PAO's environmental intelligence capability along two major dimensions: *accumulation* and *assimilation*. Accumulation refers to the PAOs' routines and

processes to acquire and collect information regarding every element of their broader environment including artists, funders, board members, patrons and subscribers, artistic and peer organizations, potential for-profit partners and service providers (such as technology suppliers), consultants, professional associations, and the public community. Assimilation, on the other hand, is the PAOs' ability to disseminate the information, generate a knowledge-base, and integrate it into the design, programming, production, and delivery of their products and services.

The positive relation between an inward flow of information from the environment toward the organization (e.g., market research, market orientation, technology scanning, and learning from customers and competitors) and innovation, new service development, and new product development has been theorized and tested in both for-profit (Agarwal, Krishna Erramilli, & Dev, 2003; den Hertog et al., 2010; Menor & Roth, 2007) and NFP sectors (Barczak, Kahn, & Moss, 2006; Camarero & Garrido, 2008a, 2008b; Chalmers & Balan-Vnuk, 2012; Choi, 2012; Sanzo-Perez et al., 2015; Weerawardena & Sullivan Mort, 2012). Particularly, innovation in PAOs is highly dependent on how their external conditions compare to their internal resources and strengths (G. B. Voss et al., 2008), which necessitates a certain level of environmental intelligence.

The new stakeholder expectations put PAOs at the junction of several different activities and business models and product and service innovation goals cannot be fulfilled without comprehensive and updated information. Product content innovation was once possible by merely finding out about the prominent works through professional communities and matching the available resources with the level of the selected works. Nowadays, however, the ideas of diversity and social relevance necessitate the individual PAOs to incorporate their regional culture and local artists into their artworks. Moreover, PAOs as risk-averse organizations need to be aware of the reaction of different audience segments to the new artworks. This makes PAOs acquire and analyze

both global and local data regarding the audiences' expectations and feedbacks from peer organizations and local PAOs. Developing new artforms requires new technology and facilities. Knowing the possibilities and other organizations' experiences in absorbing and implementing these technical aspects heightens the probability of successful product innovations.

H1a: The PAO's environmental intelligence is positively related to its level of product innovation.

In addition, service delivery innovations are mostly delivered through partnership with for-profit and service businesses, as is the case for the so-called cultural tourism services. A thorough understanding of the local opportunities and potential partnerships aids PAOs in selecting and defining their innovative service delivery. Being aware of the challenges and necessities regarding the incorporation of services and business models similar to other NFP organizations could both eliminate waste and risks and elevate the success propensity. New service development programs (e.g., public education and social inclusion programs) also heavily depend on the in-depth knowledge of the PAOs about liabilities, needs, and characteristics of the hosting communities. Direct data acquisition and analysis and close cooperation with relevant NGOs and social service providers could be considered as the key elements of such services.

H1b: The PAO's environmental intelligence is positively related to its level of service innovation.

4.2 Internal Integration Capability

The positive relationship between internal integration and innovation and new product development in both for-profit and NFP sectors has been well established in the literature (Agarwal et al., 2003; Fu, 2015; Hult, Ketchen Jr., Adams, & Mena, 2008; Lin & Chen, 2008; Liu, Chen, & Tao, 2015; Luca & Atuahene-gima, 2007; Tatikonda & Montoya-Weiss, 2001; Tsou, Chen, & Liao, 2016). Internal integration capability (IIC) generally refers to both formal and informal

collaborative behavior, information exchange, and joint decision-making within an organization (Fu, 2015; Gittell, 2006; Lin & Chen, 2008; Liu et al., 2015). Integration in terms of innovative processes is considered as the "coordinated overlap and interaction of certain new product development activities" (Lin & Chen, 2008, p. 85); it may include resource integration, cross-functional team integration, intra-process (concurrent) integration, and knowledge integration (Lin & Chen, 2008). Resource integration is about cohesive allocation of resources at each stage of the value chain and between departments to facilitate the product and process flows within and across departments (Hult et al., 2008). Cross-functional team integration, on the other hand, refers to the level of interaction and communication, coordination, information-sharing, and joint involvement across departments (Tsou et al., 2016). Intra-process integration is about developing a holistic view to managing conception, planning, production, and marketing of the new products (Hong, Doll, Nahm, & Li, 2004). Finally, knowledge integration regards the degree of incorporation of customers' and suppliers' information into planning processes as well as the level of a shared understanding of the organization's abilities in design, processes, and production.

Accordingly, from an operations perspective, internal integration can be viewed from two perspectives: (i) an intellectual perspective which relates to the information and knowledge flow related to the planning processes, and (ii) a practical perspective corresponding to the optimized dissemination and exploitation of physical, monetary, and human resources between tasks and routines. Hence, in this study, we define PAOs' internal integration capability along two dimensions: *design* and *implementation*. Integration in design pertains to the inclusion of all departments and members (e.g., board, operations, marketing) and their knowledge and expertise regarding the planning and programming of the products and services. Integration in implementation, on the other hand, focuses on coordinating the interactions between various

processes and departments as well as allocating and integrating the resources to ensure that the planned quality, speed, and smoothness of the processes are met and the balance between the routine operations and innovative processes is maintained.

Internal integration has remained a main challenge to the PAOs because they have maintained their traditional highly institutionalized and departmentalized structure despite the gradual development of new positions, departments, and processes (Glynn, 2000). Therefore, PAOs strive for creating synergies through creating organizational memory, collaboration, and coordination via a pattern of simultaneous decentralization and formalization to address their environmental complexities in design and implementation. Timely and frequent intellectual interactions are also proved to be influential on organizational confidence and coordination, leading to better evaluation and exploitation of opportunities, detecting the alternatives, and creating shared mental models (Cohen & Levinthal, 2000; Liu et al., 2015).

The formation of cross-departmental committees for coordination between different constituents of the internal operations is a practical initiative for PAOs to instill internal integration, which is normally achieved by assigning some members as coordinators (Tepavac, 2010). Such coordination has been shown to result in increased innovation in cultural and artistic contexts (Camarero & Garrido, 2008b). Another approach is to engage artists and other members in the decision-making processes. In some cases, the design of certain projects is completely delegated to the artists or their representatives are consulted for programming and planning (Tepavac, 2010). Given that artists historically were concerned about not having a vote in their organizations' decisions (DiMaggio, 1982b) and made many attempts to achieve such a voice (Orleans, 1997), such new initiatives increases their commitment and job satisfaction resulting from more decentralized and flat structures (Scapolan & Montanari, 2013). Additionally, joint

decision-making leads to devising better strategies and collective commitment to those strategies (Liu et al., 2015) due to the development of shared interpretations of organizational contingencies amongst members (i.e., convergence of the logics of action).

The evolution of programming processes in orchestras is a good example in this regard. Throughout the years, they have gradually shifted from the conductor monopoly to duopoly of artistic director-managing director, to small programming teams made up of the directors and their assistants, and to the current situation where the pioneers in the industry take advantage from the inputs of a diverse and inclusive set of experts (DiMaggio, 1982b; Kremp, 2010; Pompe & Tamburri, 2011; Symphony Nova Scotia, 2014; Thuerauf, 2003). The formation of cross-departmental programming committees (made up of the executive and other board members, managing director, art director and their teams, artists' representatives, operations and marketing departments, as well as consultants and experts from outside the organizations) elevates the level of new idea generation and implementation in PAOs. Collaborative behaviors also smooth organizations' communication and boost the cross-fertilization of ideas and multiplicity of perspectives, together with higher mental capacity for responding to environmental contingencies and more potential for task planning and controlling.

Lastly, product and service innovations significantly add to the level of intensity and simultaneity of routines in PAOs, which, in turn, increases the multitude of logics, conflicting interests and priorities, as well as the number of experts engaged in design and implementation processes. These together lead to inefficiencies in communication, resource allocation, and conflict resolution processes both within and between teams and departments. In this vein, it could be hypothesized that higher rates of successful product and service innovation coincide with higher rates of internal integration. Thus:

H2a: The PAO's internal integration is positively related to its level of product innovation.

H2b: The PAO's internal integration is positively related to its level of service innovation.

4.3 Core Operational Capability

We define core operational capability (COC) as a differentiated set of "skills, processes, and routines for incrementally refining and reinforcing existing operations processes" (Wu et al., 2010, pp. 727-728). It includes both artistic (i.e., aesthetic and technical abilities of the artists and the conductor) and technical competencies (i.e., stage and auditorium facilities' quality) required for preparation and performing complicated works and projects with a high standard, in nominal time periods (Boyle, 2007; Tepavac, 2010). The capability encompasses two dimensions: (i) *artistic component,* which refers to the overall collective level of artistry and technical ability of the PAO as the result of its persistence and frequent experiences in performing demanding programs and pieces; and (ii) *technical component,* which pertains to the PAO's competencies in terms of improving their logistics for stage, rehearsals and backstage, auditorium facilitations, as well as its commitment to improve acoustic, sound, and visual systems in venue.

Tepavac (2010) puts the artistic excellence as the footstone of her model of innovation in PAOs, as all five cases she had studied were high on the main technical and artistic abilities. In the same vein, we suggest that the COC acts as a driver of resource accumulation in PAOs, which in turn enables them to innovate in other aspects of their products and services because of three reasons. First, being renowned for mastery in one aspect of the artistic work (i.e., leveraging the COC) elevates their chances to attract other artists and partners. Second, given that artistic competency is PAOs' most important mission, having accomplished a desired level allows them to spend their resources on experimentation and exploration on various aspects of their products and services (i.e., innovativeness). Third, assuming that the COC results in artistic excellence (i.e.,

appreciation of peers and experts), the PAO will gain both the legitimacy and the required financial resources (through winning peer reviewed grant applications) to start exploring more artistic domains and reaching diverse groups of audiences.

In addition, the larger the organizational size of the PAOs and the higher the number of their tenured artists group, the higher is their aesthetic vitality, i.e. their operational capability (Glynn 2000). Sectional practice sessions, inviting resident conductors/directors, providing artists with professional development programs, and other welfare and self-empowering facilities are amongst the initiatives used by PAOs to promote higher levels of expertise, quality, and commitment at different levels of the organizations. By extension, performing modern and contemporary pieces (i.e., product innovation) is not possible, unless the PAO has a large size (i.e., relatively high number of artists available) or is flexible enough to increase its size when needed. It also requires a large and fully modernized stage and other proper logistical and technical facilities, as well as the skill and expertise to use those facilities by the crew. While all these resources are required, the capability to rehearse and deliver such pieces for a top-class performance, in a very limited time interval, is a matter of time, hard work, and aiming the goal and being committed to it for years (Tepavac, 2010).

H3a: The PAO's core operational capability is positively related to its level of product innovation.

H3b: The PAO's core operational capability is positively related to its level of service innovation.

4.4 Partnership and Collaboration Capability

Partnerships are among the most important paths toward innovation as they enable organizations to obtain resources and capabilities they already lack, avoid wastes, create synergies, and focus on their priorities (Backer, 2002; Harmancioglu et al., 2009; Hitt et al., 2016; Preece,

2005; Scheff & Kotler, 1996b; Weinstein, 2010). They are also great sources of external knowledge to organizations (Duysters & Lokshin, 2011; Love, Roper, & Vahter, 2014). The academic literature on service innovation highlights the necessity of partnerships in new service development and delivery where each partner facilitates a different component of the whole designed service (den Hertog et al., 2010). Further, the organizations' ability to detect the potential for value-creation is realized and enhanced through co-designing and co-producing alongside their partners (Kindström et al., 2013).

Although taking part in coalitions of value-creation is of critical importance, the competency to coordinate and manage such interactions is also crucial (Eisenhardt & Martin, 2000; Teece, 2007). The same is also true about the ability to invest in and handle relationships with multiple partners in parallel, in order to accommodate current and future needs for co-creation. Meanwhile, an important aspect of managing the inter-organizational collaborations is realized through wise selection of partners, avoiding the downsides of the partnership, and minimizing the cost of interactions by enhancing certain capabilities through the relationship (Backer, 2002; Weinstein, 2010). In other words, partnerships are beneficial and synergistic when wisely planned and developed, but can detract from organizational performance in the absence of coordination and cooperation capabilities or other misalignments between organizations (Tepavac, 2010; G. B. Voss & Voss, 2000; Weinstein, 2010).

In this study, we define partnership and collaboration capability (PCC) as PAOs' and their members' experience and competency in absorbing for-profit or NFP, artistic or non-artistic business partners, as well as their success in leveraging frequent and long-term well-coordinated inter-organizational collaborations at low transactional costs. In this regard, factors such as commitment, trust, proper communication methods, lower levels of reputation risk and conflicts,

as well as higher levels of perceived benefits are essential ingredients of effective partnership relationships (M. J. Sanzo, Álvarez, Rey, & García, 2015).

There are multiple evidences of positive impact of partnership and collaboration on innovation and performance in the NFP sector. Jaskyte and Lee (2006) found a positive relationship between inter-organizational relationships and innovation in NFPs. In social services NPFs, collaboration between organizations leads to improved performance, due to its positive effect on resource saving as well as resource generation. Hartley et al. (2013) also introduced collaborative innovation as an alternative for organizational entrepreneurship and market competition in the US NFP public sector (Wade-Berg & Robinson-Dooley, 2015). Finally, low transactional cost, long-term business-NFP partnerships are proved to positively influence innovation, capacity building, operational and mission performance factors, as well as financial resource absorption rates in NFP foundations (M. J. Sanzo et al., 2015).

For PAOs, collaboration and partnership with other artistic entities has been an important traditional source of performing artforms, whether the partner would be an artist, another artistic organization or society (e.g., ballet, opera, choir, soloists). However, presenting innovative works, either in terms of content or artform entails deployment of knowledge and capability sources which even large organizations lack in isolation, specially when it comes to interdisciplinary approaches to artform (Scheff & Kotler, 1996b). On the other hand, service innovation either necessitates knowledge, expertise, assets, and capabilities in the fields which basically fall outside the area of PAOs' business (e.g., adopting technologies, educational and other public projects) or entails combining unrelated types of service with the main products (e.g., out of venue concerts, supplementary services, accommodations, tours, tourism programs). That is why there has recently been an intense growth in the number of innovative partnerships between PAOs and for-profit

technology or service providers or with other arts and cultural organizations (Backer, 2002; Bakhshi & Throsby, 2009; Castro-Martínez et al., 2013; Ostrower, 2003; Symphony Nova Scotia, 2014; Tepavac, 2010). In addition, the academic literature provides cases supporting a positive relationship between investment in close partnership relationships and successful innovative outcomes (Castro-Martínez et al., 2013; Tepavac, 2010).

H4a: The PAO's partnership and collaboration capability is positively related to its level of product innovation.

H4b: The PAO's partnership and collaboration capability is positively related to its level of service innovation.

5. PAO Performance

The PAOs strive to meet diverse interests of their internal and external stakeholders and to satisfy the complex and unique artistic tastes of their audiences (Hume et al., 2006; Weinstein & Bukovinsky, 2009). They are primarily responsible to their funding agencies and boards of directors which are increasingly requiring them to be more transparent in terms of evaluation and dissemination of their operations and performance metrics (Turbide & Laurin, 2009). Besides, PAOs' sustained success in the long run depends on the alignment between their processes on the one hand, and their values, missions, and strategies on the other (Weinstein & Bukovinsky, 2009).

While, the PAOs' performance – like other NFP organizations – has been traditionally measured in terms of effectiveness rather than efficiency (Turbide & Laurin, 2009), Kaplan and Norton's Balanced Score Card (BSC) offers them an effective tool for developing strategic plans, aligning their processes with those strategies, measuring their performance, and comparing it with the defined strategic goals and visions throughout all levels and divisions (Turbide & Laurin, 2009; Weinstein & Bukovinsky, 2009; Zorloni, 2012). These BSCs address five aspects of PAOs' performance; namely, (i) financial perspective, (ii) customer perspective, (iii) internal operations

perspective, (iv) innovation and learning perspective, and (v) public value and benefit perspective (Kaplan & Norton, 2001; Weinstein & Bukovinsky, 2009). In the same vein, we focus on artistic (parallel to internal operations), social (parallel to customer and general public), and financial performance as the main measures of PAOs' operational outcomes.

Financial performance (FP) of a PAO is defined as its overall success in ensuing earned (i.e., ticket sales, subscription fees, merchandize, service incomes, etc.) and unearned financial resources (i.e., funds, grants, donations, and sponsorships) and maintaining a feasible balance of their revenues and expenses (Herman, 1990). There is a general consensus among the members of the arts community that too much focus on public opinion or audience taste could undermine the artistic merit of a PAO (Gainer & Padanyi, 2002). Therefore, the NFP PAOs should ideally create a balance between meeting their social goals and maintaining their artistic viability, as two indicators of their effectiveness (Preece, 2005). In other words, their actions and strategies should respond to both artistic and social interests of their stakeholders so that they can secure an adequate flow of financial as well as non-financial resources.

From a BSC standpoint, artistic performance (AP) refers to the efficiency and effectiveness of PAOs' internal operations as well as their learning/innovative processes. In this study, we define it as the overall level of artistic merits and contributions that a PAO makes to the art community or the industry, as perceived by experts, peers, and artists (Glynn, 2000; Glynn & Lounsbury, 2005; Preece, 2005; Sorjonen, 2011). A high level of artistic performance or excellence is amongst the most important factors in absorbing and retaining artistic talents and partners by PAOs (Scapolan & Montanari, 2013). It also has a significant effect on their survival, reputation, and legitimacy. Particularly, the experts' opinions directly affect the funding agencies' decisions, since fund applications are normally reviewed by peer artists. Therefore, artistic performance can play a

significant role in increasing both earned and unearned revenues of PAOs (Gainer & Padanyi, 2002; Padanyi & Gainer, 2003; Preece, 2005):

H5: Artistic performance of a PAO is positively related to its financial performance.

Social performance (SP) refers to a mix of advantages that PAOs can create for both the community they reside in (i.e., potential audiences and non-attenders) as well as their audiences (Preece, 2005). In general, it can be defined as the overall success of a PAO in absorbing and retaining the continuous attendance and attention of the audiences in its public events and paid services, together with its commitment to presenting products and services to a broader and more diverse population in the society ─ either the art-enthusiasts who are accustomed to cultural consumption or infrequent attenders or non-attenders. This dimension of performance is well reflected in audience satisfaction and retention, which directly affects the PAOs' earned revenues (Camarero & Garrido, 2008b, 2008a; Gainer & Padanyi, 2002, 2005; Hume & Sullivan Mort, 2010; Hume et al., 2006; Vakharia & Janardhan, 2017) as well as their public value (Voss & Voss, 2000a, 2000b). The earned revenues ususally account for thirty to fifty percent of the PAOs' total income (Orchestra Canada, 2017; Weinstein & Bukovinsky, 2009). Besides, although public value creation may not directly generate revenue for the PAOs, it can immensely affect their unearned revenues since the funding agencies, private donors, and corporate sponsors are increasingly concerned about this issue. Therefore,

H6: Social performance of a PAO is positively related to its financial performance.

5.1 Innovation and Performance

Based on the dynamic capabilities theory as well as the literature on innovation in manufacturing and service sectors, innovation and new product/service development are one of the most effective approaches for organizations to gain competitive advantage and improve their

operational and/or financial performance in the face of environmental uncertainties (Agarwal et al., 2003; Eisenhardt & Martin, 2000; Hitt et al., 2016; Wu et al., 2010). Particularly, the NFP organizations require innovation to deal with the uncertainties and increasing pressures to develop their products and processes in social services (Sanzo-Perez et al., 2015; Weerawardena & Sullivan Mort, 2012). For example, in their study of professional NFP theatres, Voss et al. (2006) found a positive relationship between product innovation and performance. Similarly, Camarero and Garrido (2008b) showed that technical and organizational innovations positively affected economic, social, and comparative measures of performance in NFP museums.

Although performing contemporary works (i.e., content innovation) by PAOs might not be in favor of a majority of the audiences who prefer more classic works of the great masters (Cancellieri & Turrini, 2016; Orleans, 1997; Thuerauf, 2003), combining higher levels of artistic quality with more frequent performances of modern pieces can elevate the appreciation of the artists, critics, and experts in the peer organizations, as well as the community and funding agencies. Moreover, productions that entail novel formal aspects ─ especially works of quality which bring about the appreciation of the public and elevate the attendance rates ─ can positively influence the artistic merits of the organization (Gainer & Padanyi, 2002). While currently only a small segment of the subscribers and general audience (i.e., arts-enthusiasts) are primarily focused on the pure artistic values of the presented works (Hume et al., 2006), research in the field has not been able to refute the general public's appreciation for the artistic merits of the organizations and artworks. In fact, despite the common perceptions regarding the inability of the general audience in detecting the artistic intrigues, PAOs are recently advised to accept the public artistic sensitivities (Gainer & Padanyi, 2002; Tepavac, 2010), as product innovations could also absorb the attention of non-expert audiences. This is, in particular, justifiable where formal sophistication

and simultaneity of different streams of meaning embodied in artforms and other sources (e.g., musical, visual, and textual codes) absorb the new generations, specially the millennials, more effectively; hence, extends the experiential aspects and appeal of the presented products (Bakhshi & Throsby, 2009; Brown, 2004). Therefore,

H7a: Product innovation in a PAO is positively related to its artistic performance.

H7b: Product innovation in a PAO is positively related to its social performance.

Service innovations, on the other hand, are aimed at absorbing the attention of the otherwise disconnected segments of the society by accentuating services or aspects of the service which favor the social development and public roles of the PAOs over their artistic merits. Besides, service innovations are implemented to heighten and deepen the PAOs' relationship with the general audience, particularly the entertainment-seekers, by enhancing the accessibility and experiential aspects of the artistic encounters (Hume, 2008; Hume et al., 2006). The effect of new service development on performance, effectiveness, and competitiveness in for-profit sector is established in the literature (Menor & Roth, 2008). In PAOs, the experiential aspects of the new service offerings as well as addressing the expectations of different audience segments promote the social performance; hence promote their financial performance (Andreasen & Belk, 1980; Hume & Sullivan Mort, 2010; Menor, 2015; Scheff & Kotler, 1996a).

H8a: Service innovation in a PAO is positively related to its social performance.

In addition, service innovations are basically designed to widen the audience-base and ensure customer retention in terms of irregular audiences. Keeping higher numbers of community members in touch with art would be a contribution to the art and can result in the appreciation of arts community. Moreover, it could add to the propensity of the audiences to become serious audiences or even art practitioners. As a matter of fact, children and youth participating in

public/paid educational and outreach programs are more likely to become future artists. The activities aiming to increase and retain the audience-base can also positively enhance the learning curve of the organizations in both artistic (i.e., stimulation of the appreciation of the community for art) and operational aspects, especially in the long-run.

H8b: Service innovation in a PAO is positively related to its artistic performance.

Finally, artistic and social performance might seem as two opposing ends of the PAOs performance; which suggests that there is a prevalent trade-off in the effect of innovation on these two performance outcomes. However, reflecting on the fluidity of the art and the human nature and accounting for the enormous dissimilarities in the characteristics and expectations of different segments of PAOs' stakeholders, a compelling assertion would be that any kind of innovation can have positive effects on both aspects of the performance, albeit by different degrees. Even in the case of trade-offs, PAOs are still able to manage their portfolio of products and services in a way to compensate for the damaged aspect of the performance by redirecting the gained resources toward that aspect and generate a balanced cycle of absorbing and investing the resources.

6. Methodology

6.1 Data Collection

To empirically examine the proposed conceptual model, a survey questionnaire was distributed amongst a sample of NFP orchestras in North America (Canada and the US) through mail and email (Dillman, 1978). North American orchestras are one of the oldest PAOs in the region with idiosyncratic organizational and institutional characteristics which can best represent the phenomenon under study. Due to the small population of the NFP orchestras in Canada and the US, and to counter the speculated low response rates, the survey was distributed to all 422 non-

community orchestras we could reach out to (out of a total of 658 whose information was available on the Internet or in the Orchestra Canada/The League of American Orchestras databases). A total of 98 organizations (38 Canadian and 60 American) responded to the survey which led to an overall response rate of 23% (43% and 18% in Canada and the US, respectively).

To reduce key-informant bias, we targeted the PAO top managers (such as executive directors, presidents, CEOs, and general managers) in our survey: they are well-informed about the strategies and operations of their organizations and are in close contact with their audiences due to PAO's relatively flat structure (Gainer & Padanyi, 2005). They are also considered as the centerfold of their organizations connecting the artistic, administrative, and governance bodies. Respondents were offered to provide us with their name and email address and opt in to receive an executive report of the study results as well as a $5 gift card. A descriptive analysis of the demographic information of the respondents and their corresponding orchestras can be found in Table 1.

Table 1. Demographic data of survey participants

Country	**Percent of sample**	**Gender**	**Percent of sample**
Canada	38.8%	Male	52.0%
US	61.2%	Female	48.0%
Type of org. (players)	**Percent of sample**	**Age**	**Percent of sample**
Professional	68.4%	20-40	20.4%
Semi-pro	24.5%	41-60	52.0%
Amateur	7.1%	61-81	27.6%
Position	**Percent of sample**	**Budget level**	**Percent of sample**
CEO	20.4%	Over $5M	16.3%
Executive Director	51.0%	$2M-5M	14.3%
General Manager	11.2%	$1M-2M	24.5%
Artistic Director	2.0%	$500K-1M	15.3%
President	3.1%	$200K-500K	15.3%
Other	12.2%	Under $200K	14.3%

	Mean	**Min-Max**	**Mode**
Orchestra size (No. of players)	75	0-965	70
Age of orchestra	52 years	7-123	35

A preliminary round of phone calls was made to ensure the accuracy of the contact details and identity of the respondents, followed by a second round of phone calls to introduce the research team and survey to the potential respondents. Another round of follow-up phone calls was made approximately 2 weeks after the distribution. Canadian orchestras were given the choice of receiving a hard copy or an online version of the questionnaire, whereas all American orchestras received the online version, due to budgetary limitations.

6.2 Survey Questionnaire and Measures

The survey instrument used for this research included a total of 63 seven-point Likert-type items to capture the level of performance, innovation, and organizational capabilities (i.e., the 9 main constructs) as well as a set of demographic questions to control for potential confounding effects (listed in Appendices A to C). The respondents were asked to evaluate their organizations' activities, processes, and performance, in comparison with their peer organizations in the field within a 3-year time period. These measures were either a modified version of existing scales in arts management and NFP literatures or newly developed measures based on an integrative view to the arts and NFP as well as service operations management studies. Regardless, the content and wording of these scales were validated by an expert panel of four orchestra music professionals. The experts' recommendations on language and colloquial expressions as well as their suggested items were considered in the final design of the questionnaire.

6.2.1 PAO Innovation

The existing scales for PAOs' innovativeness were mainly focused on measuring the innovation in content of the products (i.e., shows), mostly through calculating the divergence degree of each organization's program from the sample average. These scales did not encompass

the other three dimensions put forth in this study including innovation in product artform and service delivery as well as new service development (Bhansing, Leenders, & Wijnberg, 2017; DiMaggio & Stenberg, 1985; Tamburri et al., 2015; G. B. Voss et al., 2006).

Drawing on a few cases and measures of innovation discussed in the literature and also based on the publicly available documents on various instances and possibilities of content and artform innovation in the orchestra field, a set of items was developed and further reviewed and improved by the expert panel. This resulted in a combination of nine items for measuring product innovation in orchestras (Appendix A), two of which evaluated the degree of novelty and originality of the programmed pieces (i.e., content) and the rest (partially adapted from Camarero and Garrido (2008b), Sanzo-Perez et al. (2015), and based on concepts from Brown (2004) and G. B. Voss et al. (2008)) captured the artform innovation, in terms of usage of new resources and technologies, interdisciplinary and interpretive programming, radical and creative approaches to artform presentation, and diversity of orchestral genres.

Service innovation, on the other hand, despite being discussed in the field of PAOs, has not been empirically studied yet. Hence, drawing on the insights from Hume and Sullivan Mort (2010), ten new scale items were developed to measure the two dimensions of service innovation in orchestras: eight items regarding delivery innovation in terms of venue, peripheral and supplementary services, and service encounter point; and two items for evaluating the degree of new service development activities. The content of these items was also validated by the expert panel. These measurement scales are listed in Appendix A.

6.2.2 Drivers of PAO Innovation

Ten items were adopted and adjusted to measure the environmental intelligence capability construct based on previous studies on arts and cultural organizations (Camarero & Garrido,

2008a, 2008b; Gainer & Padanyi, 2005; G. B. Voss & Voss, 2000; Z. G. Voss & Voss, 2000). These items investigate various means by which PAOs acquired information about their working environment and the extent to which they relied on this information in their design and strategizing processes.

Internal integration capability pertains to a variety of issues in organizations, specifically coordination among various departments and teams. Internal integration items were adopted from extant literature in the arts and cultural organization field (Camarero & Garrido, 2008a, 2008b; Gainer & Padanyi, 2005; G. B. Voss & Voss, 2000; Z. G. Voss & Voss, 2000) with a focus on coordination for both design (4 items) and implementation (3 items). In the same vein, the four items measuring partnership and collaboration capability were borrowed from previous studies on arts and cultural organizations (Camarero & Garrido, 2008a, 2008b; Padanyi & Gainer, 2003) and adopted to the orchestra field. These items measured the level of partnership and collaboration between the orchestras and other for-profit, as well as NFP businesses.

As opposed to the above-mentioned capabilities, the core operational capability had never been empirically assessed before. As a result, drawing on a few studies and qualitative anecdotes (Glynn, 2000; Tepavac, 2010; G. B. Voss et al., 2008) as well as the expert panel interviews, a new measurement scale was developed. The scale items focused on nurturing and developing individual capabilities (1 item), as well as artistic (3 items), and technical capabilities (4 items). Appendix B presents the measurement scales for the discussed capabilities.

6.2.3 PAO Performance

Reliable and validated subjective performance measures were borrowed from a few seminal studies concentrated on evaluation of different aspects of performance in the arts and cultural sectors (Appendix C). Our adapted six-item scale for financial performance (Camarero & Garrido,

2008b, 2008a; Padanyi & Gainer, 2003; G. B. Voss & Voss, 2000) evaluated the level of orchestras' accomplishments in absorbing earned and unearned financial resources, as well as their success in realizing their strategized financial goals in pursuing a healthy and sustained budgetary situation. Padanyi and Gainer's (2003) artistic performance measure was adopted focusing on orchestras' reputation among their peer organizations from different perspectives including absorbing and retaining artistic and non-artistic human resources, realizing missions, and delivering services, as well as orchestras' own artists' opinion on how well they have achieved their mission. Borrowed from a variety of studies in the field (Camarero & Garrido, 2008a, 2008b; Gainer & Padanyi, 2005; Padanyi & Gainer, 2003), our five-item social performance scale contained two items measuring the level of audiences' satisfaction with the type and quality of the programs and services, whereas the other three items evaluated the level of each organization's contribution to public values in both artistic and general social terms.

6.2.4 Control Variables

The literature suggests that symphony orchestras' programs and strategies are highly influenced by a number of factors such as their annual budget and size (i.e., number of players) (Boyle, 2007; Tamburri et al., 2015). The League of American Orchestras and Orchestra Canada have also categorized their member orchestras based on their budget level. It could be suggested that orchestras with higher budget levels possess larger artistic and financial resource pools to invest in various innovative initiatives. Moreover, literature suggests that larger orchestras (i.e., orchestras with higher number of players) are potentially more capable of being innovative especially in terms of product innovation (Glynn, 2000; Tepavac, 2010). Accordingly, we controlled for the effect of these two variables in our analysis. Besides, as the respondents' answers can be confounded by their various demographic characteristics, we also controlled for their

gender, country, social desirability, and age in our data analysis.

6.3 Data Appropriateness Precautions and Tests

There was a sum of 13 missing values within the received hard copy questionnaires (online survey was set to not allow for skipping items by respondents) which equaled 0.15% of the total number of values. Little's Missing Completely at Random (MCAR) test (Little & Rubin, 1987) showed that these missing values were not caused by any hidden systematic pattern ($p > 0.05$); hence, we used the average value of each item to replace the missing value, as any imputation method was allowed (Hair, Anderson, Tatham, & William, 1998). The result was a dataset of 98 complete cases.

In order to diminish the chance of common method bias due to consistency artifacts, the questions regarding dependent variables (i.e., performance and innovation items) preceded the ones related to independent variables (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Moreover, a set of 5 social desirability test items was included at the end of the questionnaire; the results confirmed that the respondents were not overly influenced by the phenomenon while responding. Additionally, Harman's single factor test was conducted (Harman, 1976) to investigate the presence of a common method bias in the dataset. The lack of a single factor accounting for a large part of the variance suggested that the results did not vastly suffer from a common method bias problem (Podsakoff et al., 2003).

6.4 Data Analysis

A path analysis based on Partial Least Squares (PLS), using SmartPLS 3.2.8 software package (Hair Jr, Hult, Ringle, & Sarstedt, 2016), was conducted to test the proposed conceptual model. PLS method is based on reducing error variance in testing the structural and measurement

models simultaneously (Fornell & Larcker, 1981). We selected this method for data analysis due to a number of reasons as follows (Peng & Lai, 2012). First, the nature of this study is exploratory because it is a first attempt to operationalize some of the constructs (such as core operational capability, product innovation, service innovation) and develop their measurement scale. Besides, our hypotheses regarding the relationships between these constructs were mostly based on observations, cases, and qualitative studies rather than large-scale empirical evidences. Furthermore, PLS is more appropriate, compared to covariance-based structural equation modeling (CBSEM) techniques, when it comes to analyzing complex models using small sample sizes. As for our model, if we were to use CBSEM, we would have needed a minimum sample size of 175, considering a minimum detectable effect size of 0.1 for all paths, significant level of 95%, and 80% power. Our sample of 98 cases is sufficient for applying PLS as it exceeds ten times the largest of (i) the highest number of items measuring a single construct and (ii) the highest number of paths leading to a single construct in the model (Braunscheidel & Suresh, 2009). Moreover, PLS assumes no preconditions for the measurement model, nor does it require multivariate normality in the data.

The following sections are an assessment of the measurement model and the proposed structural model.

6.4.1 Measurement Model

A test of soundness of the measurement model including assessment of reliability, convergent validity, and discriminant validity of the constructs was conducted (Fornell & Larcker, 1981). As indicated in Appendices A to C, 16 items (out of 63) were dropped during the measurement model validation process, either due to low standardized loadings or because of cross-loading on other constructs. In addition, analyses showed that all constructs under study were

unidimensional with two exceptions: items associated with core operational capability construct (COC) loaded on two different dimensions of artistic COC (COC-A) and technical COC (COC-T) with the correlation magnitude of 0.405 between the two dimensions; Similarly, service innovation items (SI) indicated a two-dimensional construct: delivery innovation (SI-D) and new service development (SI-N) with a correlation magnitude of 0.504.

Reliability of a scale is an indicator of how well the included items measure the same concept (i.e., the internal consistency of the variables). Ensuring reliability in PLS includes a twofold process of checking the reliability of the individual items of each measure, as well as evaluating the composite reliability of the items that collectively comprise the measure (inter-item consistency), which is similar to Cronbach's α in other methods. It is suggested that for the sake of individual item reliability only items with more explanatory power relative to their error variance should be accepted (Carmines & Zeller, 1979). This is translated to accepting items with standardized loadings of 0.7 or greater (Fornell & Larcker, 1981; Johnston, McCutcheon, Stuart, & Kerwood, 2004). Similarly, the recommended cut-off point for composite reliability is 0.70 (Fornell & Larcker, 1981). Table 2 presents the single item as well as composite reliabilities for all constructs calculated at 95% confidence level. All values exceed the 0.7 cut-off level, except for four items within FP, SP, and PI scales which were not dropped due to their marginal loadings and to maintain the content validity of the underlying constructs.

Two methods were used to check for the convergent validity of the constructs. First, standard loadings (i.e., individual item reliability) of all items were equal to or greater than 0.70. Second, the average variance extracted value (AVE) for each construct was equal to or greater than 0.5. This shows that items in a scale on average share at least half of their variance with the construct (see Table 2).

Table 2. Reliability and convergent validity

Construct	Items	Loadings	Composite Reliability	AVE
Environmental Intelligence Capability (EIC)	EIC-1	0.784	0.925	0.639
	EIC-2	0.791		
	EIC-4	0.761		
	EIC-5	0.732		
	EIC-6	0.832		
	EIC-7	0.841		
	EIC-9	0.847		
Internal Integration Capability (IIC)	IIC-1	0.726	0.909	0.627
	IIC-2	0.832		
	IIC-3	0.767		
	IIC-5	0.858		
	IIC-6	0.823		
	IIC-7	0.735		
Artistic Core Operational Capability (COC-A)	COC A-2	0.843	0.918	0.737
	COC A-3	0.905		
	COC A-4	0.885		
	COC A-5	0.797		
Technical Core Operational Capability (COC-T)	COC T-6	0.879	0.845	0.647
	COC T-7	0.732		
	COC T-8	0.794		
Partnership & Collaboration Capability (PCC)	PCC-1	0.806	0.896	0.684
	PCC-2	0.846		
	PCC-3	0.872		
	PCC-4	0.783		
Product Innovation (PI)	PI-1	0.684	0.891	0.58
	PI-2	0.711		
	PI-4	0.676		
	PI-6	0.83		
	PI-7	0.857		
	PI-9	0.791		
Service Innovation – Delivery (SI-D)	SI D-1	0.778	0.823	0.607
	SI D-3	0.77		
	SI D-4	0.789		
Service Innovation – NSD (SI-N)	SI N-9	0.936	0.932	0.873
	SI N-10	0.932		
Artistic Performance (AP)	AP-1	0.866	0.934	0.825
	AP-2	0.948		
	AP-3	0.909		
Social Performance (SP)	SP-1	0.699	0.862	0.555
	SP-2	0.707		
	SP-3	0.767		
	SP-4	0.777		
	SP-5	0.77		
Financial Performance (FP)	FP-1	0.699	0.835	0.559
	FP-3	0.706		
	FP-5	0.765		
	FP-6	0.816		

Discriminant validity of a construct measure ensures that its items do not overlap the conceptual territory of another construct in the model. Three methods were used to check the

discriminant validity of our measures. First, we compared the square root of average variance extracted (AVE) of every construct with all the inter-construct correlations. Table 3 is a depiction of the inter-construct correlations (as an indicator of shared variance between the pairs of constructs) where every construct's square root of AVE is inserted diagonally. It is evident that all AVE square roots (ranging from 0.745 to 0.934) exceed all correlation values (ranging from 0.114 to 0.631), which guarantees sufficient discriminant validity (Chin, 1998; Morgan, Kaleka, & Gooner, 2007).

Table 3. Correlation matrix

	AP	**COC-A**	**COC-T**	**EIC**	**FP**	**IIC**	**PCC**	**PI**	**SI-D**	**SI-N**	**SP**
AP	0.908										
COC-A	0.503	0.858									
COC-T	0.335	0.405	0.804								
EIC	0.278	0.321	0.138	0.799							
FP	0.449	0.29	0.114	0.437	0.748						
IIC	0.435	0.392	0.225	0.616	0.506	0.792					
PCC	0.242	0.315	0.24	0.629	0.307	0.5	0.827				
PI	0.318	0.325	0.238	0.424	0.32	0.512	0.538	0.762			
SI-D	0.407	0.342	0.318	0.495	0.332	0.349	0.498	0.44	0.779		
SI-N	0.201	0.23	0.317	0.631	0.329	0.525	0.573	0.608	0.504	0.934	
SP	0.561	0.501	0.212	0.365	0.464	0.467	0.374	0.289	0.361	0.354	0.745

Note: The diagonal elements are the square roots of the average variance extracted (AVEs); the off-diagonal elements are the inter-construct correlations.

Second, the items' cross-loading table (Table 4) shows that each item loads higher on its assigned construct, compared to its loadings on other constructs, which is another evidence for convergent and discriminant validity. Finally, we also applied the heterotrait-monotrait ratio of correlations (HTMT) as the most recent and assuring method for assessing discriminant validity in PLS (Henseler, Ringle, & Sarstedt, 2015). The maximum HTMT value for the constructs under study was 0.718 which is well below 0.850 as the most conservative critical HTMT value. Moreover, in order to check for the HTMT inference criterion, a round of bootstrapping creating 5000 subsamples was performed resulting in confidence intervals with upper limits all below 1

(maximum of 0.844) for the HTMT values at 95% confidence level. Therefore, we concluded that HTMT criterion for discriminant validity of constructs was met.

6.4.2 Structural Model

The structural model in PLS was assessed by testing the path coefficients along with their statistical significance. Path coefficients in PLS represent the effect size, similar to what standardized beta weights do in regression analysis. In order to test the robustness of the path coefficients, we conducted two rounds of bootstrapping (Efron & Tibshirani, 1994), creating 5000 subsamples. Bootstrapping algorithm in PLS entails a random generation of subsamples using the original dataset. Path coefficients are then calculated for each subsample. Finally, the stability of each path coefficient throughout the subsamples is established by calculating T-statistics, based on which the statistical significance of each path is evaluated.

The path coefficients and statistical significance of the structural paths were consistent across the two rounds of bootstrapping. Figure 2 and Table 5 demonstrate these values along with the explained construct variances in the model. R^2 values of 0.455, 0.300, 0.293, 0.378, 0.355, and 0.508 indicate that the model explains a fair amount of variance for FP, AP, SP, PI, SI-D, and SI-N, respectively. As results indicate, both artistic performance ($\beta = 0.283$; $p < 0.05$) and social performance ($\beta = 0.295$; $p < 0.05$) positively affect financial performance, supporting H5 and H6, respectively. Hypothesis H7a is supported as product innovation is positively associated with artistic performance ($\beta = 0.299$; $p < 0.01$); however, product innovation had no significant effect on social performance, refuting H7b. Hypothesis H8a was not supported as neither dimensions of service innovation were significantly related to social performance. In addition, H8b was partially supported as results indicated that artistic performance was significantly affected by delivery innovation ($\beta = 0.312$; $p < 0.05$) and not by new service development.

Table 4. Items' loadings and cross loadings

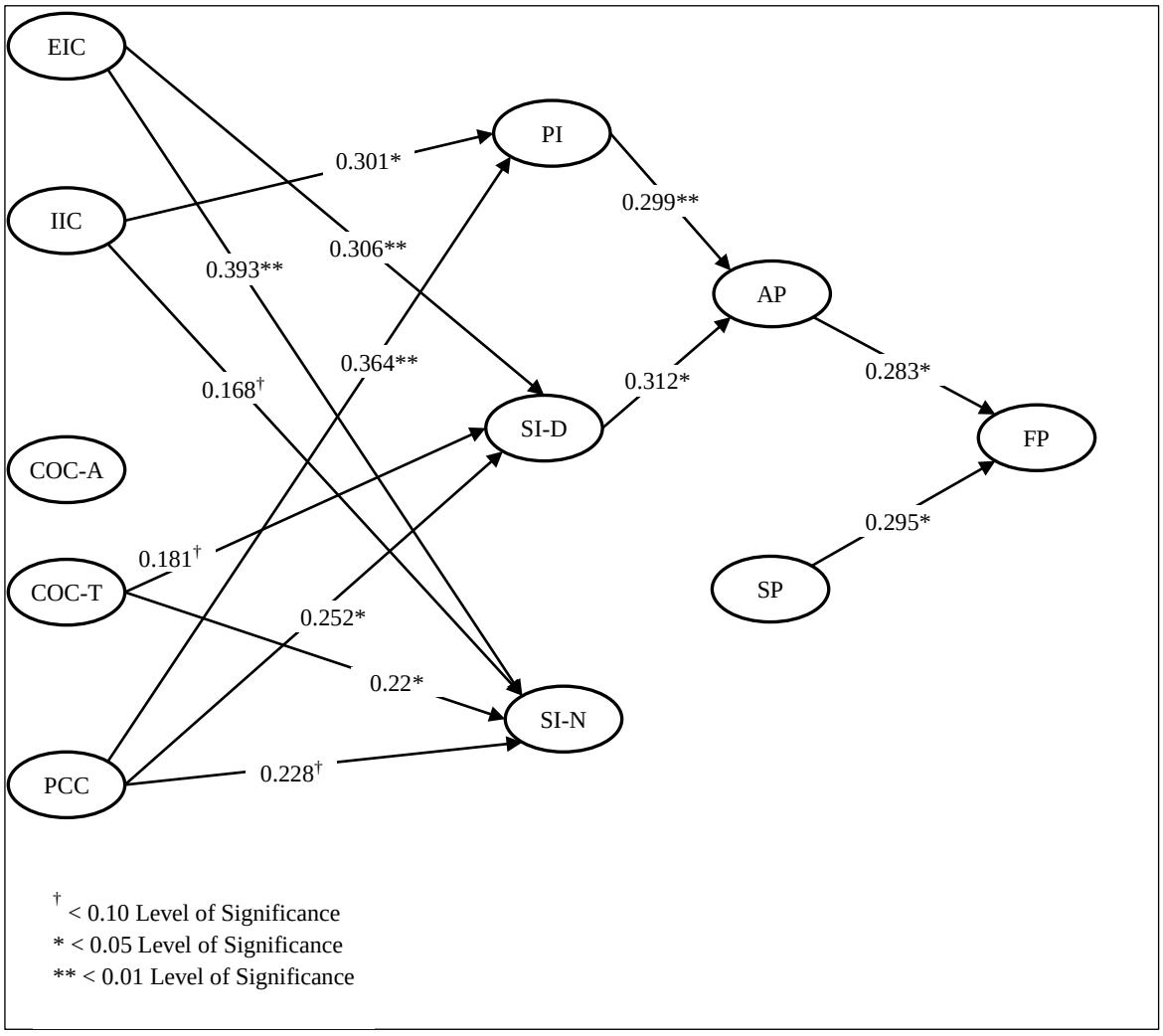
	COC-A	COC-T	FP	AP	SP	PI	SI-D	SI-N	EIC	PCC	IIC
COC A-2	**0.843**	0.262	0.299	0.444	0.481	0.27	0.313	0.127	0.276	0.263	0.359
COC A-3	**0.905**	0.349	0.211	0.403	0.412	0.33	0.322	0.227	0.314	0.346	0.322
COC A-4	**0.885**	0.341	0.189	0.377	0.422	0.297	0.306	0.19	0.242	0.318	0.297
COC A-5	**0.797**	0.457	0.32	0.534	0.417	0.204	0.224	0.249	0.268	0.124	0.387
COC T-6	0.454	**0.879**	0.159	0.426	0.279	0.253	0.362	0.319	0.197	0.306	0.242
COC T-7	0.227	**0.732**	0.081	0.095	0.039	0.12	0.142	0.178	0.051	0.032	0.132
COC T-8	0.217	**0.794**	-0.003	0.166	0.107	0.16	0.187	0.228	0.026	0.147	0.131
FP-1	0.196	0.146	**0.699**	0.253	0.369	0.203	0.143	0.303	0.331	0.203	0.459
FP-3	0.239	-0.02	**0.706**	0.366	0.468	0.188	0.189	0.107	0.32	0.267	0.378
FP-5	0.206	0.128	**0.765**	0.289	0.198	0.277	0.345	0.287	0.308	0.226	0.303
FP-6	0.216	0.109	**0.816**	0.416	0.308	0.296	0.33	0.311	0.341	0.211	0.359
AP-1	0.357	0.236	0.295	**0.866**	0.462	0.225	0.275	0.098	0.163	0.088	0.365
AP-2	0.481	0.314	0.479	**0.948**	0.503	0.354	0.368	0.218	0.256	0.275	0.481
AP-3	0.514	0.349	0.423	**0.909**	0.56	0.27	0.449	0.211	0.322	0.263	0.329
SP-1	0.415	0.171	0.32	0.43	**0.699**	0.145	0.198	0.135	0.256	0.151	0.308
SP-2	0.473	0.209	0.323	0.54	**0.707**	0.228	0.244	0.162	0.262	0.248	0.275
SP-3	0.301	0.168	0.427	0.462	**0.767**	0.274	0.234	0.288	0.25	0.321	0.414
SP-4	0.381	0.124	0.395	0.39	**0.777**	0.204	0.264	0.316	0.319	0.375	0.398
SP-5	0.347	0.142	0.255	0.316	**0.77**	0.213	0.386	0.356	0.27	0.251	0.318
PI-1	0.199	0.053	0.163	0.22	0.174	**0.684**	0.229	0.355	0.15	0.28	0.305
PI-2	0.276	0.128	0.258	0.26	0.16	**0.711**	0.28	0.325	0.15	0.296	0.227
PI-4	0.269	0.303	0.294	0.221	0.207	**0.676**	0.261	0.471	0.322	0.329	0.434
PI-6	0.154	0.189	0.165	0.218	0.205	**0.83**	0.403	0.561	0.396	0.557	0.459
PI-7	0.264	0.168	0.296	0.25	0.247	**0.857**	0.343	0.477	0.347	0.412	0.441
PI-9	0.324	0.197	0.277	0.286	0.291	**0.791**	0.432	0.514	0.448	0.496	0.405
SI D-1	0.286	0.325	0.145	0.339	0.262	0.306	**0.778**	0.299	0.401	0.368	0.322
SI D-3	0.273	0.238	0.327	0.291	0.253	0.426	**0.77**	0.483	0.387	0.369	0.233
SI D-4	0.239	0.174	0.313	0.319	0.329	0.302	**0.789**	0.407	0.368	0.429	0.256
SI N-9	0.238	0.286	0.374	0.252	0.354	0.541	0.527	**0.936**	0.585	0.524	0.495
SI N-10	0.191	0.306	0.238	0.121	0.307	0.595	0.413	**0.932**	0.594	0.547	0.486
EIC-1	0.244	0.217	0.385	0.287	0.311	0.291	0.438	0.461	**0.784**	0.478	0.486
EIC-2	0.168	0.245	0.317	0.162	0.306	0.273	0.428	0.58	**0.791**	0.487	0.481
EIC-4	0.244	-0.013	0.358	0.26	0.354	0.399	0.303	0.452	**0.761**	0.496	0.446
EIC-5	0.13	-0.032	0.242	0.048	0.184	0.286	0.333	0.508	**0.732**	0.516	0.292
EIC-6	0.368	0.076	0.421	0.23	0.247	0.402	0.371	0.537	**0.832**	0.475	0.571
EIC-7	0.288	0.1	0.381	0.281	0.3	0.316	0.438	0.466	**0.841**	0.5	0.579
EIC-9	0.337	0.155	0.337	0.28	0.338	0.399	0.445	0.516	**0.847**	0.564	0.565
PCC-1	0.214	0.08	0.208	0.114	0.256	0.445	0.346	0.383	0.499	**0.806**	0.399
PCC-2	0.223	0.275	0.346	0.268	0.348	0.454	0.461	0.531	0.556	**0.846**	0.461
PCC-3	0.292	0.155	0.261	0.166	0.347	0.456	0.386	0.449	0.552	**0.872**	0.437
PCC-4	0.31	0.26	0.189	0.233	0.279	0.424	0.442	0.513	0.469	**0.783**	0.354
IIC-1	0.254	0.22	0.422	0.409	0.45	0.344	0.311	0.294	0.415	0.317	**0.726**
IIC-2	0.324	0.205	0.44	0.448	0.364	0.364	0.305	0.369	0.569	0.412	**0.832**
IIC-3	0.302	0.124	0.42	0.273	0.385	0.456	0.3	0.475	0.587	0.345	**0.767**
IIC-5	0.362	0.245	0.372	0.37	0.382	0.446	0.237	0.467	0.426	0.43	**0.858**
IIC-6	0.35	0.212	0.428	0.368	0.317	0.451	0.248	0.449	0.432	0.447	**0.823**
IIC-7	0.258	0.063	0.324	0.212	0.331	0.343	0.267	0.406	0.487	0.416	**0.735**

Regarding the linkages between the organizational capabilities and product and service innovation, the results were mixed. Environmental intelligence capability appeared to have no significant effect on product innovation, rejecting H1a. On the other hand, H1b was strongly supported as the positive links between EI and both delivery innovation and new service development were statistically significant ($\beta = 0.306$; $p < 0.01$ and $\beta = 0.393$; $p < 0.01$ respectively). Internal integration appeared to be positively influential on product innovation, supporting H2a ($\beta = 0.301$; $p < 0.05$). H2b, however, is only partially supported as IIC marginally affects new service development ($\beta = 0.168$; $p < 0.1$) but has no significant effect on delivery innovation. H3a was refuted due to lack of a significant path between the two dimension of core operational capability and product innovation. While artistic dimension of core operational capability was not significantly linked to service innovation, technical dimension of the construct proved to be positively influential on both delivery innovation ($\beta = 0.181$; $p < 0.1$) and new service development ($\beta = 0.220$; $p < 0.05$), providing support for H3b.

Finally, results evidenced a significant positive relationship between partnership and collaboration capability and product innovation ($\beta = 0.364$; $p < 0.01$), as postulated by H4a. Similarly, PCC proved to be positively linked to service innovation as both paths to delivery innovation and new service development were statistically significant ($\beta = 0.252$; $p < 0.05$ and $\beta = 0.228$; $p < 0.1$ respectively), providing support to H4b.

With regard to the control variables, age of respondents had significant effects on financial performance. More specifically, organizations with head managers of 41 years old or older surprisingly had lower levels of financial performance. Moreover, orchestras with the highest budget level (over $5M) had a higher level of social performance.

Figure 2. Structural model with path coefficients



Finally, although the randomness of the missing values was already checked, as a test of robustness for the results of our analysis using average value imputation, we conducted a listwise deletion (complete case analysis) for comparison. A total of 6 cases (out of 98) with missing values were deleted and the analysis results of the measurement and structural models remained qualitatively the same.

Table 5. PLS structural model results

	Standardized Coefficient	t-Value[a]
Direct Effects		
Artistic Performance → Financial Performance	0.283	2.443*
Social Performance → Financial Performance	0.295	2.568*
Age 1[b] → Financial Performance	-0.398	3.119**
Age 2[c] → Financial Performance	-0.535	3.456**
Product Innovation → Artistic Performance	0.299	2.617**
Delivery Innovation → Artistic Performance	0.312	2.323*
New Service Development → Artistic Performance	-0.189	1.345
Product Innovation → Social Performance	0.135	1.065
Delivery Innovation → Social Performance	0.172	1.158
New Service Development → Social Performance	0.095	0.572
Budget 5[d] → Social Performance	0.293	1.77†
Environmental Intelligence Capability → Product Innovation	-0.023	0.236
Internal Integration Capability → Product Innovation	0.301	2.505*
Artistic Core Operational Capability → Product Innovation	0.077	0.803
Technical Core Operational Capability → Product Innovation	0.055	0.54
Partnership & Collaboration Capability → Product Innovation	0.364	3.147**
Environmental Intelligence Capability → Delivery Innovation	0.306	2.74**
Internal Integration Capability → Delivery Innovation	-0.049	0.372
Artistic Core Operational Capability → Delivery Innovation	0.11	0.936
Technical Core Operational Capability → Delivery Innovation	0.181	1.781†
Partnership & Collaboration Capability → Delivery Innovation	0.252	2.142*
Environmental Intelligence Capability → New Service Development	0.393	4.068**
Internal Integration Capability → New Service Development	0.168	1.745†
Artistic Core Operational Capability → New Service Development	-0.124	1.302
Technical Core Operational Capability → New Service Development	0.220	2.504*
Partnership & Collaboration Capability → New Service Development	0.228	1.928†
Variance explained in the endogenous variables		
Financial Performance	$R^2 = 0.455$	
Artistic Performance	$R^2 = 0.300$	
Social Performance	$R^2 = 0.293$	
Product Innovation	$R^2 = 0.378$	
Delivery Innovation	$R^2 = 0.355$	
New Service Development	$R^2 = 0.508$	

[a] ** = $p < 0.01$, * = $p < 0.05$, † = $p < 0.10$

[b] 41-60 years old; Reference group: 20-40 years old

[c] Older than 60 years old; Reference group: 20-40 years old

[d] Budget level over $5M; Reference group: under $200K

7. Discussion

The theoretical development and empirical results of this study extend the literature to date in several important ways. First, this is among the first studies which aim at conceptualization, operationalization, and empirical validation of the innovation concept in PAOs from an operations perspective. The results showed that, in a broad sense, PAO innovation comprises two aspects: product and service innovation. Product innovation entails presenting novel works and approaches regarding content or artform. Service innovation, however, consists of two distinct dimensions: delivery innovation around the core product (i.e. the show) and new service development.

Moreover, developing unprecedented works of art or new formal approaches in performing them (i.e., product innovations) have been generally considered to enhance PAO's status among the arts community (i.e., artistic performance) (Castañer & Campos, 2002; Tepavac, 2010); however, this study is the first attempt, to the best of our knowledge, to operationalize and confirm this premise using a large scale data. Further, despite our conceptualization of the product innovation construct and distinguishing between content and artform innovations, our results indicated that both aspects lend themselves to the same underlying concept. In other words, organizations striving for innovation in an artistic way normally strike a balance in investing both in new content as well as innovative approaches to artform, which results in an operational unity in pursuing the twofold goal. The results indicated that artistic performance may also be enhanced through endeavors in improving the accessibility and experiential qualities of the shows (i.e., delivery innovation).

Second, this is the only study focused on arts organizations and one of the few studies in the NFP sectors that provides evidence of the applicability of dynamic capabilities theory to these fields. More specifically, we focused on the internal drivers of innovation in PAOs in addition to

their performance outcomes and identified a bundle of four dynamic capabilities based on a systematic literature review. These capabilities, with some being exclusive to artistic businesses, were shown to contribute to PAOs' organizational goals and operations through enhancing their level of innovative initiatives. In fact, our results provide support to the radical resource-based theory (RBT) (Bacq & Eddleston, 2018; Bell & Dyck, 2012), which suggests that the value of organizational resources and capabilities is beyond profit-maximization and market rivalries.

Regarding the environmental intelligence capability (EIC), our results indicate that PAOs do not search for knowledge outside their organizations as far as it concerns their product innovation activities and artistic merits. This confirms the general belief of the practitioners in the field that too much appreciation of what others do or want will detract from the artistic quality of their products. In the orchestra field, as an instance, it is repeatedly asserted that market research is rarely done due to resource scarcities and even if it was conducted, it would be through indirect inexpensive methods such as sales analysis, rather than direct surveys or other effective means. In terms of delivery innovation and new service development, however, the results confirm the effectiveness of environmental intelligence capability, which is in line with the general understanding in the service innovation area (den Hertog et al., 2010). As for the internal integration capability (IIC), our results support the previous studies (Camarero & Garrido, 2008b), albeit in a broader sense, by indicating a positive effect of IIC on product innovation and new service development.

In addition, the significant effect of technical core operational capability (COC-T) on service innovation evidences the fact that although a considerable portion of the PAOs' audiences are highly influenced by supplementary and entertaining aspects of the programs (Hume et al., 2006), a mere focus on those aspects without paying attention to technical and logistical aspects of the

show would not be fruitful. Partnership and collaboration capability (PCC) turned out to be the most powerful and overarching capability within our proposed set, positively affecting all dimensions of product and service innovation. Additionally, the positive link between PCC and delivery innovation gives support to the results of earlier studies on the phenomenon in for-profit and NFP sectors (M. J. Sanzo et al., 2015).

Third, as was predicted in the theory development section of the research, new service development is perhaps the most daunting, demanding, and rare innovative practice in PAOs. This has gained enough support in this study, given that all four capabilities can significantly improve it. Delivery innovation, however, depended on external partnerships, environmental intelligence, and technical capabilities. Although the importance of the first two has been already highlighted in the literature, the effect of technical abilities is an interesting finding of our study. Besides, the significant relationship between IIC and product innovation is another contribution of our study. Despite the general belief of the practitioners in the field that innovation in the content and artform of PAO products is a purely artistic task, our findings confirm the importance of inclusion and integration of all organizational resources for this purpose.

Fourth, the results indicated that financial performance of a PAO is highly influenced by their artistic and social performance. This lends support to recent studies on arts and cultural organizations suggesting that the wide array of organizational goals in such organizations would ultimately be narrowed down into two aspects: their artistic merit and community contribution. It also confirms that these organizations will succeed in achieving a sustained financial condition if they fulfill a balance between these main goals (Camarero & Garrido, 2008a; Gainer & Padanyi, 2002; Preece, 2005).

Lastly, this study addresses the recent calls for research on NFP firms in the field of

operations and supply chain management ("Call for Papers for the First Emerging Discourse Incubator: Research Where the Focal Actor in the Network is Not a For-profit Firm," 2017). In addition, research in this area needs to be focused on the subsectors because of their idiosyncrasies (e.g., stakeholder groups, missions, culture, etc.) which depend on their service and products and their region. Our study fills this gap in research by focusing on NFP PAOs and more specifically, the orchestra music organizations in North America.

The most surprising outcome of the study was the absence of a significant connection between innovation and social performance. There is a possibility that our unprecedented operationalization of the social performance construct (i.e., satisfaction and engagement of both paying audiences and general public) would have contributed to this unexpected result. However, given the soundness of the measurement scales and the underlying constructs, a better explanation could be that all innovative efforts of PAOs might have merely promoted the depth of relationship with those who are already engaged with these organizations, rather than broadening the audience-base or getting the public to contact more with art. Our postulation in this regard gains more support considering the fact that both delivery and product innovation contributed to artistic performance (i.e., reputation among peers). In other words, one can assume that the satisfaction of the serious audiences with PAOs is demonstrated through a boost in artistic performance and perhaps partially through higher attendance ratios which is represented by better financial performances in our results. On the other hand, organizations' innovative actions for absorbing the public and fresh audiences might have not been quite enough or well targeted. The marginal positive effect of having the highest budget level (i.e., over $5M) on social performance suggests that being successful on this criterion might entail a rich stack of resources which only largest orchestras possess. Also, the inadequacy of normal routines for improving the social performance

might be the reason why PAOs are trying to fulfill this goal through a series of supporting activities under the umbrella of outreach initiatives.

Another surprising outcome of the research was the lack of relationship between artistic core operational capability (COC-A) and innovation. The fact, in terms of orchestra organizations, once again accentuates the taken-for-grantedness of the artistic merit: it is not an effective factor even for organizations with superior capabilities.

As noted in the results, we observed a positive effect for younger managers (aged 20-40) on financial performance. While we did not detect a bias caused by respondents' age in the dataset, this effect could be assigned to young managers' being more enthusiastic and less informed about the field, especially in smaller orchestras. It might have caused them to rate their performance higher. Another possibility could be that younger managers are normally working in small and mid-size orchestras where problems are more frequent but easier to deal with; and avenues for improvement are shorter and easier to walk. Our strongest speculation is that organizations with young managers showed higher performance because their managers were more likely to have been professionally trained and educated in arts management field.

7.1 Managerial Implications

This study makes additional managerial contributions for PAOs and the NFP sector. First, the results can be used as a benchmark or decision-making tool for PAO top managers and directors when they assess the needs and opportunities for devising their long-term plans, setting organizational goals, and developing action plans. A useful managerial hint in our findings could be the fact that many factors other than artistic capabilities can promote a PAO's artistic performance. Specifically, (i) stressing product innovation through external partnerships and intra-

organizational integration and coordination, and (ii) leveraging innovations in service delivery by accentuating technical-logistical capabilities and partnering with other businesses and service-providers can be among the effective ways of fulfilling the reputation of PAOs among their peers.

An interesting and practically applicable outcome of this study is the confirmation of the positive effect of technical capabilities on delivery innovation; in that, we assume, it signifies the importance of versatility and flexibility in making PAOs become able to go on tours and perform in unconventional venues, spaces, and circumstances, all of which entails high levels of operational adeptness.

7.2 Limitations and Future Research Avenues

Although our 23% response rate (43% and 18% in Canada and the US, respectively) is well above normal, specially considering the limited time of managers in arts and cultural sector (Gainer & Padanyi, 2002; Riedl, Kaufmann, Zimmermann, & Perols, 2013), the real empirical limitation of this study was the relatively small size of the population (less than 600 non-community orchestras operate in Canada and the US). Moreover, using cross-sectional data in the current study can undermine the validity of the causal relations in our model. Using longitudinal data in the future studies could highly add to the level of certainty about the findings of our research.

As was explained before, having explored the organizational charts of all organizations in the sample, also having contacted all accessible respondents before conducting the survey, we tried to minimize the key informant bias by addressing the most relevant top manager in each orchestra who were knowledgeable enough to answer the survey questions regarding the operations, plans, and performance outcomes. Moreover, we took all possible precautions and conducted a post hoc test to ensure that common method bias was not a major issue. However, we are aware that using

single-respondent surveys may have increased the risk of noise in the obtained results, specifically for constructs such as internal integration and external partnership which involve multiple parties (Kumar, Stern, & Anderson, 1993). As a result, this remains one of the major limitations of this study and should be addressed in future studies by reaching out for multiple respondents in each organization.

The effects of slack resources, environmental characteristics, and strategic orientation on innovation in PAOs have been rarely discussed in the literature (G. B. Voss et al., 2006, 2008; G. B. Voss & Voss, 2000; Z. G. Voss & Voss, 2000). Should we include these elements in our model, it would have become almost impossible to examine it, especially with regard to population size limitations. It could be, however, an interesting path for future studies to test our proposed model, in part or as a whole, considering the aforementioned constructs. Moreover, while we have considered and controlled for numerous confounding effects, future studies with larger samples might be able to analyze the constructs under study, using multilevel statistical analysis tools. This can considerably contribute to research in the arts and NFP area taking into account several intra-organizational and environmental elements which can cause organizations to walk different ways in innovation and performance.

The recent changes in the societal and institutional premises of the arts organizations have created a large matter of concern for managers, artists, and policy-makers (Jancovich, 2015). Exploring the relationship between different aspects of innovation and social performance, as well as other aspects of PAOs' operations which can bring about a social impact for these organizations are of great importance in the current era. As a part of this research avenue, examining the ways in which developing new services can positively affect PAOs' social performance is of great practical importance.

The results did not represent any significant effect for artistic core operational capability of orchestras; however, the technical dimension of the construct proved to be effective in a number of ways. Given that this was the first attempt for including the construct in operations studies on PAOs, we assume, further experiences in operationalizing this concept could lead to gaining a better understanding of different paths operationally-stronger PAOs can pursue. Finally, this was the first attempt to conceptualized and empirically validate a measure of innovation in PAO. Future studies can add to wealth of knowledge in operations management and innovation areas by examining and improving our proposed measures.

8. Conclusion

This study responds to call for more research on NFP organizations in operations management field, given the special characteristics of these organizations inherent in their value-chain, field of expertise, and methods of managing their actions and routines. A three-block conceptual model was put forth: drivers of innovation, dimensions of innovation, and performance outcomes. Based on a systematic literature review, four internal capabilities were identified and suggested to be influential on PAO innovation namely, environmental intelligence, internal integration, core operational, and finally partnership and collaboration.

We examined our proposed model through a survey of North American orchestras. Overall, the results indicated that environmental intelligence elevated service innovation. Internal integration promoted product innovation and new service development while external partnerships positively influenced all dimensions of innovation. The artistic dimension of core operational capabilities had no effect on innovation, whereas its technical dimension heightened service innovation. Product and delivery innovations had positive effects on artistic performance, unlike new service development which failed to show any significant effect on performance outcomes.

9. References

Agarwal, S., Krishna Erramilli, M., & Dev, C. S. (2003). Market orientation and performance in service firms: role of innovation. *Journal of Services Marketing*, *17*(1), 68–82.

Andreasen, A. R., & Belk, R. W. (1980). Predictors of Attendance at the Performing Arts. *Journal of Consumer Research*, *7*(2), 112.

Backer, T. E. (2002). PARTNERSHIP AS AN ART FORM : What Works and What Doesn ' t in Nonprofit Arts Partnerships. *Change*, *21*(November), 2008.

Bacq, S., & Eddleston, K. A. (2018). A Resource-Based View of Social Entrepreneurship : How Stewardship Culture Benefits Scale of Social Impact. *Journal of Business Ethics*, *152*(3), 589–611.

Bakhshi, H., & Throsby, Da. (2009). *Innovation in Arts and Cultural Organisations Hasan Bakhshi and David Throsby*.

Barczak, G., Kahn, K. B., & Moss, R. (2006). An exploratory investigation of NPD practices in nonprofit organizations. *Journal of Product Innovation Management*, *23*(6), 512–527.

Becker, S. W., & Whisler, T. L. (1967). The Innovative Organization: A Selective View of Current Theory and Research. *The Journal of Business*, *40*(4), 462–469. Retrieved from

Bell, G. G., & Dyck, B. (2012). Conventional Resource-Based Theory and its Radical Alternative : A Less Materialist-Individualist Approach to Strategy, (2011), 121–130.

Bhansing, P. V. (2016). Understanding the Scheduled Audience Capacity for Productions of Performing Arts Companies : The Role of Product Innovativeness and Organizational Legitimacy Understanding. *International Journal of Arts Management*, (forthcoming), 63–78.

Bhansing, P. V., Leenders, M. A. A. M., & Wijnberg, N. M. (2017). Scheduled audience capacity for performing arts productions: The role of product innovativeness and organizational legitimacy. *International Journal of Arts Management*, *20*(1), 63–77.

Blumberg, M. (2018). Key statistics on Canada's charity and non-profit sector. Retrieved January 12, 2019, from https://www.globalphilanthropy.ca/blog/key_statistics_on_canadas_charity_and_non_profit_sector

Boyle, S. J. (2007). Ownership, efficiency and identity: the transition of Australia's symphony orchestras from government departments to corporate entities. Retrieved from researchonline.mq.edu.au

Braunscheidel, M. J., & Suresh, N. C. (2009). The organizational antecedents of a firm's supply chain agility for risk mitigation and response. *Journal of Operations Management*, *27*(2), 119–140.

Brown, A. (2004). Smart concerts: Orchestras in the Age of Edutainment. *Issues Brief*, *5*.

Cadogan, J. W., & Diamantopoulos, A. (1995). Narver and Slater, Kohli and Jaworski and the

market orientation construct: integration and internationalization. *Journal of Strategic Marketing*, *3*(1), 41–60.

Call for Papers for the First Emerging Discourse Incubator: Research Where the Focal Actor in the Network is Not a For-profit Firm. (2017). *Journal of Supply Chain Management*, *53*(3), 78–80.

Camarero, C., & Garrido, M. J. (2008a). The Influence of Market and Product Orientation on Museum Performance. *International Journal of Arts Managment*, *10*(2), 14–26.

Camarero, C., & Garrido, M. J. (2008b). The role of technological and organizational innovation in the relation between market orientation and performance in cultural organizations. *European Journal of Innovation Management*, *11*(3), 413–434.

Cancellieri, G., & Turrini, A. (2016). The phantom of modern opera: How economics and politics affect the programming strategies of opera houses. *International Journal of Arts Management*, *18*(3), 25–36.

Carmines, E. G., & Zeller, R. A. (1979). *Reliability and validity assessment* (Vol. 17). Sage publications.

Castañer, X., & Campos, L. (2002). The determinants of artistic innovation: Bringing in the role of organizations. *Journal of Cultural Economics*, *26*(1), 29–52.

Castro-Martínez, E., Recasens, A., & Jiménez-Sáez, F. (2013). Innovation systems in motion: an early music case. *Management Decision*, *51*(6), 1276–1292.

Chalmers, D. M., & Balan-Vnuk, E. (2012). Innovating not-for-profit social ventures: Exploring the microfoundations of internal and external absorptive capacity routines. *International Small Business Journal*, *31*(7), 785–810.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, *295*(2), 295–336.

Choi, S. (2012). Learning Orientation and Market Orientation as Catalysts for Innovation in Nonprofit Organizations. *Nonprofit and Voluntary Sector Quarterly*, *43*(2), 393–413.

Cohen, W. M., & Levinthal, D. A. (2000). Absorptive capacity: A new perspective on learning and innovation. In *Strategic Learning in a Knowledge economy* (pp. 39–67). Elsevier.

Damanpour, F. (1988). Innovation Type, Radicalness, and the Adoption Process. *Communication Research*, *15*(5), 545–567.

Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis Of Effects Of Determinants and Moderators. *Academy of Management Journal*, *34*(3), 555–590.

Damanpour, F., & Evan, W. M. (1984). Organizational Innovation and Performance: The Problem of "Organizational Lag." *Administrative Science Quarterly*, *29*(3), 392–409.

den Hertog, P., van der Aa, W., & de Jong, M. W. (2010). Capabilities for managing service innovation: Towards a conceptual framework. *Journal of Service Management*, *21*(4), 490–514.

Deshpande, R., Farley, J. U., & Webster, F. E. (1993). Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quadrad Analysis. *Journal of Marketing*, *57*(1), 23.

Dillman, D. A. (1978). *Mail and telephone surveys: The total design method* (Vol. 19). Wiley New York.

DiMaggio, P. (1982a). Cultural entrepreneurship in nineteenth-century Boston, part II: the classification and framing of American art. *Media, Culture & Society*, *4*(4), 303–322.

DiMaggio, P. (1982b). Cultural entrepreneurship in nineteenth-century Boston: the creation of an organizational base for high culture in America. *Media, Culture & Society*, *4*(1), 33–50.

DiMaggio, P., & Mukhtar, T. (2004). Arts participation as cultural capital in the United States, 1982–2002: Signs of decline? *Poetics*, *32*(2), 169–194.

DiMaggio, P., & Stenberg, K. (1985). Why do some theatres innovate more than others? An empirical analysis. *Poetics*, *14*(1–2), 107–122.

Downs Jr., G. W., & Mohr, L. B. (1976). Conceptual Issues in the Study of Innovation. *Administrative Science Quarterly*, *21*(4), 700–714.

Duysters, G., & Lokshin, B. (2011). Determinants of Alliance Portfolio Complexity and Its Effect on Innovative Performance of Companies*. *Journal of Product Innovation Management*, *28*(4), 570–585.

Efron, B., & Tibshirani, R. J. (1994). *An introduction to the bootstrap*. CRC press.

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic Capabilities: What Are They? *Strategic Management Journal*, *21*(10/11), 1105.

Evard, Y., & Colbert, F. (2000). Arts management: a new discipline entering the millennium? *International Journal of Arts Management*, *2*(2), 4–13.

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, *18*(1), 39–50.

Fu, N. (2015). The role of relational resources in the knowledge management capability and innovation of professional service firms1. *Human Relations*, *68*(5), 731–764.

Gainer, B., & Padanyi, P. (2002). Applying the marketing concept to cultural organisations: an empirical study of the relationship between market orientation and performance. *International Journal of Nonprofit and Voluntary Sector Marketing*, *7*(2), 182–193.

Gainer, B., & Padanyi, P. (2005). The relationship between market-oriented activities and market-oriented culture: Implications for the development of market orientation in nonprofit service organizations. *Journal of Business Research*, *58*(6), 854–862.

Gatignon, H., Tushman, M. L., Smith, W., & Anderson, P. (2002). A structural approach to assessing innovation: Construct development of innovation locus, type, and characteristics. *Management Science*, *48*(9), 1103–1122.

Gittell, J. H. (2006). Relational coordination: coordinating work through relationshis of shared

goals, shared knowledge and mutual respect. *Relational Perspectives in Organizational Studies: A Research Companion*, 74–94.

Glynn, M. A. (2000). When Cymbals Become Symbols: Conflict Over Organizational Identity Within a Symphony Orchestra. *Organization Science*, *11*(3), 285–298.

Glynn, M. A. (2002). Chord and discord: Organizational crisis, institutional shifts, and the musical canon of the symphony. *Poetics*, *30*(1–2), 63–85.

Glynn, M. A., & Lounsbury, M. (2005). From the critics corner: Logic blending, discursive change and authenticity in a cultural production system. *Journal of Management Studies*, *42*(5), 1031–1055.

Hair, J. F., Anderson, R. E., Tatham, R. L., & William, C. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.

Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.

Harman, H. H. (1976). *Modern factor analysis*. University of Chicago press.

Harmancioglu, N., Droge, C., & Calantone, R. J. (2009). Theoretical lenses and domain definitions in innovation research. *European Journal of Marketing*, *43*(1/2), 229–263.

Hartley, J., Sørensen, E., & Torfing, J. (2013). Collaborative innovation: A viable alternative to market competition and organizational entrepreneurship. *Public Administration Review*, *73*(6), 821–830.

Henderson, R. M., & Clark, K. B. (1990). Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms. *Administrative Science Quarterly*, *35*(1), 9.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135.

Herman, R. D. (1990). Methodological Issues in Studying the Effectiveness of Nongovernmental and Nonprofit Organizations. *Nonprofit and Voluntary Sector Quarterly*, *19*(3), 293–306.

Hitt, M. A., Xu, K., & Carnes, C. M. (2016). Resource based theory in operations management research. *Journal of Operations Management*, *41*, 77–94.

Hong, P., Doll, W. J., Nahm, A. Y., & Li, X. (2004). Knowledge sharing in integrated product development. *European Journal of Innovation Management*, *7*(2), 102–112.

Hult, G. T. M., Ketchen Jr., D. J., Adams, G. L., & Mena, J. A. (2008). Supply Chain Orientation and Balanced Scorecard Performance. *Journal of Managerial Issues*, *20*(4), 526–544.

Hume, M. (2008). Developing a Conceptual Model for Repurchase Intention in the Performing Arts: The Roles of Emotion, Core Service and Service Delivery. *International Journal of Arts Management*. HEC - Montréal - Chair of Arts Management.

Hume, M., & Sullivan Mort, G. (2010). The consequence of appraisal emotion, service quality,

perceived value and customer satisfaction on repurchase intent in the performing arts. *Journal of Services Marketing*, *24*(2), 170–182.

Hume, M., Sullivan Mort, G., Liesch, P. W., & Winzar, H. (2006). Understanding service experience in non-profit performing arts: Implications for operations and service management. *Journal of Operations Management*, *24*(4 SPEC. ISS.), 304–324.

Jancovich, L. (2015). Breaking down the fourth wall in arts management: The implications of engaging users in decision-making. *International Journal of Arts Management*, *18*(1), 14–28.

Jaskyte, K., & Lee, M. (2006). Interorganizational relationships: A source of innovation in nonprofit organizations? *Administration in Social Work*, *30*(3), 43–54.

Johnston, D. A., McCutcheon, D. M., Stuart, F. I., & Kerwood, H. (2004). Effects of supplier trust on performance of cooperative supplier relationships. *Journal of Operations Management*, *22*(1), 23–38.

Kaplan, R. S., & Norton, D. P. (2001). Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part II. *Accounting Horizons*, *15*(2), 147–160.

Kimberly, J. R., & Evanisko, M. J. (1981). Organizational Innovation: The Influence of Individual, Organizational, and Contextual Factors on Hospital Adoption of Technological and Administrative Innovations. *Academy of Management Journal*, *24*(4), 689–713.

Kindström, D., Kowalkowski, C., & Sandberg, E. (2013). Enabling service innovation: A dynamic capabilities approach. *Journal of Business Research*, *66*(8), 1063–1073.

Kohli, A. K., & Jaworski, B. J. (1990). Market Orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing*, *54*(2), 1–18.

Kohli, A. K., Jaworski, B. J., & Kumar, A. (1993). MARKOR: a measure of market orientation. *Journal of Marketing Research*, 467–477.

Kremp, P.-A. (2010). Innovation and Selection: Symphony Orchestras and the Construction of the Musical Canon in the United States (1879-1959). *Social Forces*, *88*(3), 1051–1082.

Kumar, N., Stern, L. W., & Anderson, J. C. (1993). Conducting Interorganizational Research Using Key Informants. *Academy of Management Journal*, *36*(6), 1633–1651.

League, A. S. O. (1993). Americanizing the American Orchestra. *A Report of the National Task Force for the American Orchestra: An Initiative for Change*. ASOL Washington, DC.

Lin, M. J. J., & Chen, C. J. (2008). Integration and knowledge sharing: Transforming to long-term competitive advantage. *International Journal of Organizational Analysis*, *16*(1–2), 83–108.

Little, R. J. A., & Rubin, D. B. (1987). Statistical analysis with missing data. *Hoboken, NJ: Wiley*.

Liu, J., Chen, J., & Tao, Y. (2015). Innovation performance in new product development teams in China's technology ventures: The role of behavioral integration dimensions and collective efficacy. *Journal of Product Innovation Management*, *32*(1), 29–44.

Love, J. H., Roper, S., & Vahter, P. (2014). Learning from openness: The dynamics of breadth in external innovation linkages. *Strategic Management Journal*, *35*(11), 1703–1716.

Luca, L. M. De, & Atuahene-gima, K. (2007). Market Knowledge Dimensions and Cross-Functional Collaboration: Examining the Different Routes to Product Innovation Performance. *Journal of Marketing*, *71*(1), 95–112.

Mcphee, P. (2002). Orchestra and Community: Bridging the Gap. *Harmony: Forum of the Symphony Orchestra Institute*, *15*, 25–33.

Mechling, G., & Little, B. (2000). Service encounter mismatches: a conceptual framework integrating it and job design. *Journal of Business Strategies*, *17*(1), 65.

Mencarelli, R., & Pulh, M. (2006). Positioning the Supply of Live Performance: Innovative Managerial Practices Relating to the Interaction of Spectator, Performance and Venue. *International Journal of Arts Management*. HEC - Montréal - Chair of Arts Management.

Menor, L. J. (2015). Illuminating the service provider's strategic mandate on realizing apt quality and value through service innovation. In *The Handbook of Service Innovation* (pp. 523–544). Springer.

Menor, L. J., & Roth, A. V. (2007). New service development competence in retail banking: Construct development and measurement validation. *Journal of Operations Management*, *25*(4), 825–846.

Menor, L. J., & Roth, A. V. (2008). New Service Development Competence and Performance: An Empirical Investigation in Retail Banking. *Production and Operations Management*, *17*(3), 267–284.

Morgan, N. A., Kaleka, A., & Gooner, R. A. (2007). Focal supplier opportunism in supermarket retailer category management. *Journal of Operations Management*, *25*(2), 512–527.

Morris, G., Wyman, O., Roberts, D., MacIntosh, J., Bordone, A., & Harold, J. (2018). *The financial health of the United States nonprofit sector facts and observations*.

Narver, J. C., & Slater, S. F. (1990). The Effect of a Market Orientation on Business Profitability. *Journal of Marketing*, *54*(4), 20–35.

National Endowment for the Arts Annual Report. (2018). *National endowment for the arts*.

NEA office of public affairs. (2011). *National Endowment for the Arts Annual Report 2010*. Washington, DC.

NEA office of public affairs. (2019). *National Endowments for the Arts Annual Report 2018*. Washington, DC.

NEA office of research & analysis. (2012). *How the United States funds the arts*. Washington, DC.

NEA office of research & analysis. (2013). *How a nation engages with art: highlights from the 2012 survey of public participation in the arts (Research Report #57)*. Washington, DC.

Oliva, R., & Kallenberg, R. (2003). Managing the transition from products to services.

International Journal of Service Industry Management, *14*(2), 160–172.

Olson, J. R., Belohlav, J. A., & Boyer, K. K. (2005). Operational, economic and mission elements in not-for-profit organizations: The case of the Chicago Symphony Orchestra. *Journal of Operations Management*, *23*(2 SPEC. ISS.), 125–142.

Orchestra Canada. (2017). Orechestra Canada Comparative Report 2016-17 Summary by Budget Size. Retrieved July 2, 2018, from https://drive.google.com/open?id=1RwIpdrNUI0yJGl45iiYBsFZYqMdsDsAI

Orleans, J. (1997). Rebuilding the Repertoire for the 21st Century. *Harmony: Forum of the Symphony Orchestra Institute*, (4), 57–69.

Ostrower, F. (2003). Cultural collaborations: Building partnerships for arts participation, 46. Retrieved from http://www.wallacefoundation.org/knowledge-center/audience-development-for-the-arts/strategies-for-expanding-audiences/pages/building-partnerships-for-arts-participation.aspx

Padanyi, P., & Gainer, B. (2003). Peer Reputation in the Nonprofit Sector: Its Role in Nonprofit Sector Management. *Corporate Reputation Review*, *6*(3), 252–265.

Pagell, M., Fugate, B., & Flynn, B. B. (2017). From the Editors—Introducing JSCM's First Emerging Discourse Incubator for 2018/19. *Journal of Supply Chain Management*, *53*(3), 76–77.

Paswan, A., D'Souza, D., & Zolfagharian, M. A. (2009). Toward a contextually anchored service innovation typology. *Decision Sciences*, *40*(3), 513–540.

Peng, D. X., & Lai, F. (2012). Using partial least squares in operations management research: A practical guideline and summary of past research. *Journal of Operations Management*, *30*(6), 467–480.

Peterson, R. A. (1992). Understanding audience segmentation: From elite and mass to omnivore and univore. *Poetics*, *21*(4), 243–258.

Peterson, R. A., & Kern, R. M. (1996). Changing Highbrow Taste: From Snob to Omnivore. *American Sociological Review*, *61*(5), 900.

Pierce, J. L. (2000). Programmatic Risk-Taking by American Opera Companies, 45–63.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879.

Pompe, J., & Tamburri, L. (2011). Factors that influence programming decisions of US symphony orchestras, 167–184.

Preece, S. (2005). The Performing Arts Value Chain. *International Journal of Arts Management*. HEC - Montréal - Chair of Arts Management.

Rey-García, M., Calvo, N., & Mato-Santiso, V. (2019). Collective social enterprises for social innovation: Understanding the potential and limitations of cross-sector partnerships in the field of work integration. *Management Decision*, *57*(6), 1415–1440.

Riedl, D. F., Kaufmann, L., Zimmermann, C., & Perols, J. L. (2013). Reducing uncertainty in supplier selection decisions: Antecedents and outcomes of procedural rationality. *Journal of Operations Management*, *31*(1–2), 24–36.

Rodríguez, J. A., Giménez Thomsen, C., Arenas, D., & Pagell, M. (2016). NGOs' initiatives to enhance social sustainability in the supply chain: poverty alleviation through supplier development programs. *Journal of Supply Chain Management*, *52*(3), 83–108.

Rowe, L. A., & Boise, W. B. (1974). Organizational Innovation: Current Research and Evolving Concepts. *Public Administration Review*, *34*(3), 284–293.

Sampson, S., & Craig, F. (2006). Foundations and implications of a proposed unified services theory. *Production and Operations Management*, *15*(December), 329–343.

Sanzo-Perez, M. J., Álvarez-González, L. I., & Rey-García, M. (2015). How to encourage social innovations: A resource-based approach. *Service Industries Journal*, *35*(7), 430–447.

Sanzo, J. M., Álvarez, I. L., & Rey, M. (2017). Lights and Shadows of Business-Nonprofit Partnerships: The Role of Nonprofit Learning and Empowerment in this Ethical Puzzle. *Sustainability* .

Sanzo, M. J., Álvarez, L. I., Rey, M., & García, N. (2015). Business–Nonprofit Partnerships: Do Their Effects Extend Beyond the Charitable Donor-Recipient Model? *Nonprofit and Voluntary Sector Quarterly*, *44*(2), 379–400.

Scapolan, A., & Montanari, F. (2013). How to attract and retain artistic talent: The case of an italian ballet company. *International Journal of Arts Management*, *16*(1), 4–19.

Scheff, J., & Kotler, P. (1996a). Crisis in the arts : The marketing response. *California Management Review*, *39*(1), 28.

Scheff, J., & Kotler, P. (1996b). How the Arts Can Prosper Through Strategic Collaborations. *Harvard Business Review*, *74*(1), 52–62.

Schroeder, R. G., Scudder, G. D., & Elm, D. R. (1989). Innovation in manufacturing. *Journal of Operations Management*, *8*(1), 1–15.

Sigala, M. (2016). Learning with the market: A market approach and framework for developing social entrepreneurship in tourism and hospitality. *International Journal of Contemporary Hospitality Management*, *28*(6), 1245–1286.

Sorjonen, H. (2011). The manifestation of market orientation and its antecedents in the program planning of arts organizations. *International Journal of Arts Management*, *14*(1), 4–18.

Stats and Stories 2017-18 Canada Council Funding Overview. (2018). Retrieved January 12, 2019, from https://canadacouncil.ca/research/stats-and-stories

Stockenstrand, A.-K., & Ander, O. (2014). Arts Funding and Its Effects on Strategy, Management and Learning. *International Journal of Arts Management*, *17*(1), 43–53.

Symphony Nova Scotia. (2014). *Symphony Nova Scotia Strategic Plan 2014/15 to 2017/18*. Retrieved from https://symphonynovascotia.ca/about/financial-information/

Tamburri, L., Munn, J., & Pompe, J. (2015). Repertoire Conventionality in Major US Symphony Orchestras: Factors Influencing Management's Programming Choices. *Managerial and Decision Economics*, *36*(2), 97–108.

Tatikonda, M. V., & Montoya-Weiss, M. M. (2001). Integrating Operations and Marketing Perspectives of Product Innovation: The Influence of Organizational Process Factors and Capabilities on Development Performance. *Management Science*, *47*(1), 151–172.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509–533.

Tepavac, L. (2010). *Fearless journeys: Innovation in five American orchestras*. (C. Maciariello, Ed.), *The League of American Orchestras*. New York.

The death of classical music in America. (2011). Retrieved August 13, 2019, from https://247wallst.com/investing/2011/05/01/the-most-cash-strapped-classical-music-organizations/

Thompson, V. A. (1965). Bureaucracy and Innovation. *Administrative Science Quarterly*, *10*(1), 1–20.

Thuerauf, J. P. (2003). *Orchestra Programming*.

Tsou, H. T., Chen, J. S., & Liao, S. W. (Jolie). (2016). Enhancing intellectual capital for e-service innovation. *Innovation: Management, Policy and Practice*, *18*(1), 30–53.

Turbide, J., & Laurin, C. (2009). Performance Measurement in the Arts Sector: The Case of the Performing Arts. *International Journal of Arts Management*, *11*(2), 56–70.

Vakharia, N. K., & Janardhan, D. (2017). Knowledge-centric arts organizations: Connecting practice to performance. *International Journal of Arts Management*, *19*(2), 14–31.

Van de Ven, A. H. (1986). Central Problems in the Management of Innovation. *Management Science*, *32*(5), 590–607.

Vézina, M., Ben Selma, M., & Malo, M. C. (2018). Exploring the social innovation process in a large market based social enterprise: A dynamic capabilities approach. *Management Decision*.

Vézina, M., Malo, M., & Ben Selma, M. (2017). Mature social economy enterprise and social innovation: the case of the Desjardins environmental fund. *Annals of Public & Cooperative Economics*, *88*(2), 257–278.

Voss, G. B., Montoya-Weiss, M., & Voss, Z. G. (2006). Aligning Innovation with Market Characteristics in the Nonprofit Professional Theater Industry. *Journal of Marketing Research*, *43*(2), 296–302.

Voss, G. B., Sirdeshmukh, D., & Voss, Z. G. (2008). The Effects of Slack Resources and Environmentalthreat on Product Exploration and Exploitation. *Academy of Management Journal*, *51*(1), 147–164.

Voss, G. B., & Voss, Z. G. (2000). Strategic orientation and firm performance in an artistic environment. *Journal of Marketing*, *64*(1), 67–83.

Voss, Z. G., & Voss, G. B. (2000). Exploring the Impact of Organizational Values and Strategiv Orientation on Performance in Not-for-Profit Professional Theatre. *International Journal of Arts Management*, *3*(1), 62–76.

Voss, Z. G., Voss, G. B., & Yair, K. (2016). Orchestra Facts : 2006-2014. Retrieved January 10, 2019, from https://www.arts.gov/sites/default/files/Research-Art-Works-League.pdf

Wade-Berg, J. A., & Robinson-Dooley, V. (2015). Perceptions of collaboration and service integration as strategic alternatives: An examination of social service nonprofit organizations in the late 1990s. *Journal of Public Management & Social Policy*, *20*(2), 2.

Weerawardena, J., & Sullivan Mort, G. (2012). Competitive Strategy in Socially Entrepreneurial Nonprofit Organizations: Innovation and Differentiation. *Journal of Public Policy & Marketing*, *31*(1), 91–101.

Weinstein, L. (2010). The Design Implementation and Management of Social Alliances for Arts- and Culture-Oriented Organizations. *International Journal of Arts Management*, *12*(3), 31–42.

Weinstein, L., & Bukovinsky, D. (2009). Use of the Balanced Scorecard and performance metrics to achieve operational and strategic alignment in arts and culture not-for-profits. *International Journal of Arts Management*, *11*(2), 42–55.

Wu, S. J., Melnyk, S. A., & Flynn, B. B. (2010). Operational Capabilities: The Secret Ingredient. *Decision Sciences*, *41*(4), 721–754.

Zorloni. (2012). Designing a Strategic Framework to Assess Museum Activities. *Alessia International Journal of Arts Management Winter*, *14*(2).

Appendix A: Measurement Scales- PAO Innovation

To what extent do you agree or disagree with the following statements in terms of your organization's programs and services compared to your peer organizations? (1= strongly disagree, 7= strongly agree)

Product innovation (partially adapted from Camarero and Garrido (2008b) and Sanzo-Perez et al. (2015), and based on insights from Brown (2004) and Voss et al. (2008))

PI-1: We frequently program contemporary pieces or works of national, local, and young artists.

PI-2: We commission composers and/or premiere new pieces.

PI-3: *We use new resources and technologies to improve the artistic experience of the audiences. (Dropped)*

PI-4: We incorporate technological innovations in artform presentation.

PI-5: *We incorporate education and communication into our performances (using text or online material, speeches, smart devices, apps, etc.). (Dropped)*

PI-6: We present contextually-programmed (e.g., theme series), interdisciplinary (e.g., dance, performance, drama), and other novel artforms to our audiences.

PI-7: We challenge ourselves with working on radical new pieces and new approaches to our artform.

PI-8: *We strive to present a diverse and musically accessible set of orchestral genres in our programs. (Dropped)*

PI-9: We find creative ways to present standard orchestral works in a new context for 21st. century audiences.

Service innovation (based on insights from Hume and Sullivan Mort (2010) and Menor (2015))

SI D-1: We improve the accessibility of our programs to the local community and the public (scheduling, parking, transport, accommodations, handicapped access, etc.).

SI D-1: *We improve our venue services, including ticketing, cloaking, and amenities. (Dropped)*

SI D-2: We frequently perform in new venues/non-traditional venues or go on tours.

SI D-3: We perform in public spaces (outdoors).

SI D-4: *We improve or innovate our educational programs. (Dropped)*

SI D-5: *We share our performances and other materials online. (Dropped)*

SI D-6: *We supplement our programs with extra services/activities (e.g., backstage meetings, meals). (Dropped)*

SI D-7: *We are open to changing the norms and etiquette of the program or venue to absorb new audiences. (Dropped)*

SI N-1: We regularly introduce new services to our audiences, partners, or the community.

SI N-2: We strive to deliver our current services in new ways.

Appendix B: Measurement Scales- Drivers of PAO Innovation

To what extent do you agree or disagree with the following statements in terms of your organization's practices compared to your peer organizations? (1= strongly disagree, 7= strongly agree)

Environmental intelligence capability (adopted from Camarero and Garrido (2008a, 2008b), Gainer and Padanyi (2005), Vakharia and Janardhan (2017), and Voss and Voss (2000))

EIC-1: We measure our audiences' satisfaction.

EIC-2: We research the market to learn about our audiences' current and future needs.

EIC-3: *We effectively use state-of-the-art technology and Internet services to collect and manage data. (Dropped)*

EIC-4: We keep a close eye on other organizations' practices and tactics.

EIC-5: We monitor which works of art are successful at other peer organizations.

EIC-6: We monitor industry-wide changes and assess their impact on the expectations of donors and those who provide resources.

EIC-7: We set our goals based on the data collected from the stakeholders.

EIC-8: *We strategize our future plans based on the data collected from the stakeholders. (Dropped)*

EIC-9: We respond rapidly to the actions of other peer organizations that serve our stakeholders.

EIC-10: *We share stakeholder data and information among our departments. (Dropped)*

Internal integration capability (adapted from Camarero and Garrido (2008a, 2008b), Luca and Atuahene-gima (2007), and Voss and Voss (2000), and based on insights from arts management and organizational theory literature)

IIC-1: All managing bodies (including the board, executives, and directors) are committed to developing organization's strategies.

IIC-2: All departments are involved in drawing up the organization's plans.

IIC-3: Cross-departmental committees are made for programming and other planning activities.

IIC-4: *Artists are adequately represented in decision-making processes and strategic planning. (Dropped)*

IIC-5: Staff from various departments work closely together.

IIC-6: Departments get along well with each other.

IIC-7: Activities between artistic, operations, and marketing departments are well coordinated.

Core operational capability (based on insights from Voss et al. (2008))

COC A-1: *We have low turnover rates within our artistic personnel. (Dropped)*

COC A-2: We are among the best in artistic interpretation.

COC A-3: Our performances are executed at a high level.

COC A-4: We can prepare and perform difficult repertoire at a high level within normal rehearsal times.

COC A-5: We are among the best in production and operations.

COC T-6: We have the capability to produce performances with high quality sound and visual production.

COC T-7: We manage our auditorium and facilities, logistics, and operations at a high level.

COC T-8: We are able to accommodate and support large productions.

Partnership and collaboration capability (adapted from Camarero and Garrido (2008a) and Padanyi and Gainer (2003))

PCC-1: We maintain collaborative relationships with other arts organizations which complement what we have to offer (e.g., dance, theatre).

PCC-2: We collaborate with other businesses to offer new options and services to our audiences.

PCC-3: We initiate productive working relationships with other non-profit organizations.

PCC-4: We work well with for-profit technology/service providers and consultants.

Appendix C: Measurement Scales- PAO Performance

How do you describe your organization's achievements compared to your peer organizations in terms of the following criteria: (1= well below average, 4= average, 7= well above average)

Financial performance (adapted from Camarero and Garrido (2008b), Padanyi and Gainer (2003), and Voss & Voss (2000))

FP-1: The amount of private donations.

FP-2: *The amount of government funds. (Dropped)*

FP-3: The amount of single-ticket and season subscription sales.

FP-4: The amount of other earned revenues (non-ticket, non-subscription).

FP-5: *The amount of budget surplus. (Dropped)*

FP-6: The level of financial goals accomplished.

Artistic performance (adapted from Padanyi and Gainer (2003))

AP-1: Reputation among peer organizations for attracting skilled staff and committed volunteers.

AP-2: Reputation among peer organizations for achieving your mission.

AP-3: Reputation among peer organizations for program/activities/services delivery.

AP-4: *Reputation among your own artist members for effectively achieving your mission. (Dropped)*

Social performance (adapted from Camarero and Garrido (2008b) and Gainer and Padanyi (2005))

SP-1: The level of audiences' satisfaction with your type of programs, activities, or services.

SP-2: The level of audiences' satisfaction with your quality of programs, activities, or services.

SP-3: The level of awareness in the community about your programs and services.

SP-4: The level of your recognition as a cultural reference point in the area.

SP-5: The level of your contribution to improvement in the standard of living of local residents.

Appendix D: Survey- Letter of Information Sample

Dear Madam/Sir,

We are a team of researchers at University of Manitoba and we would like to invite you to participate in a research project which addresses innovation and change within not-for-profit orchestras from an operations management point of view. If you are a CEO or executive director in a North American orchestra, you are qualified to participate. We have obtained your contact information from your organization's website.

This letter of information is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The questionnaire you have received along with this letter includes questions about the operations and routines in your orchestra, along with services, events, and artistic content presented by your orchestra. It also includes questions regarding your organization's performance along different organizational goals it pursues. Please answer the questions without hesitation, because generally, your first impressions best reflect your true opinions. The estimated time for completing the questionnaire is about 15 minutes. As a sign of our appreciation for your participation in this study, you will receive a $5 gift card when you return/submit the completed questionnaire.

There are no known or anticipated risks from participating in this study to you or your employment with your organization. Your identity, your organization's identity, and your participation in this study will remain confidential. We will de-identify the questionnaire you submit upon reception by assigning an ID to your records and discarding/redacting all identifying information afterwards. The completed questionnaires will be kept safe and secure and only the principal investigator will have access to them. The collected information will be used only to advance knowledge and for the dissemination of the overall results at academic or professional forums and outlets. The collected questionnaires will be discarded after three years.

You may withdraw from this study after you complete and return the questionnaire by June 30, 2019; all your information and data will be deleted from our records. We will not be able to accommodate the withdrawal requests afterwards due to the dissemination of data in academic and professional outlets and conferences by that date.

You can opt in for receiving a summary of the study findings. In this case, please provide us with your name and email address. Your personal information will be collected and stored separate from the questionnaire, will be accessible only to the principal investigator, will be used only for aforementioned purposes, and will be securely discarded as soon as we send you the study results and the gift card. The summary of the research results will become available until approximately

December 2019. It could be used to gain more knowledge about the current state of the industry and your peer organizations in terms of innovation, best practices, and performance.

Completion and submission of the questionnaire by you indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way. This research has been approved by the Psychology/Sociology Research Ethics Board (PSREB) at University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator at 204-474-7122 or humanethics@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

We would be very grateful if you accept our invitation to participate in this study.

Sincerely,