

THE EFFECTS OF ORGANIZATIONAL BUYING BEHAVIOUR AND
DECISION-MAKING ON AN ORGANIZATION'S PROPENSITY TO
BE AN EARLY ADOPTER

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Abstract

Previous researchers have tried to explicate early adoption with innate innovativeness, socio-, demo-, and psychographics. However, targeting and communication based on these factors has led to unsatisfactory market launch results for practitioners, whereas scholars have only succeeded to cover a limited extent in explaining early adoption. Therefore, identifying and locating early adopters has remained as a million-dollar question for both – marketers and researchers.

Thus, the research objective of this study was to assess, how does the organizational buying behaviour and decision-making style impact an organization's propensity to be an early adopter. Based on a literature review on diffusion of innovation theories, early adoption, and organizational buying behaviour, an online survey was crafted and dispatched to the managers of Finnish team and individual sports associations, which represented the study's non-profit organization target sample.

Measures utilized in the survey had been established by earlier scholars, whereas they were slightly adapted to improve their fit for the non-profit sample. Out of the 3927 sent survey invitations, 599 responses were successfully completed, yielding the study with a response rate of 15.3%. An exploratory factor analysis was conducted on the data, and it led to the exclusion of some items. Hypotheses were tested with hierarchical multiple linear regression analysis.

The findings indicated that organizations' willingness to cannibalize over the value of their existing procurements and appreciation towards their suppliers' flexibility – positively predicted their propensity to be early adopters. Additionally, intuitive decision-making style was found to intensify the positive relationship between supplier flexibility and early adoption. The results also showed that organizations with routinized purchasing habits expressed lower propensity to be early adopters, while avoidant decision-making style further accelerated this negative relationship.

Overall, the results implied that managers should involve and observe the behaviour of their potential customers during the early phases of their product development, to improve the success in market launches. By introducing a relationship between early adoption and more dynamic factors, which the organizational buying behaviour decision approaches represents, the findings challenged the predominant theory, which has held early adopters as static entities.

The study was exposed to common method bias and adaption of items to some extent compromised the reliability of some of the used measures. A similar study should be replicated with separated data collection in another non-profit or firm sample to contribute to the generalizations of findings. In addition, future scholars can develop new measures to advance early adoption research with less emphasis on technology, as it is not the only form of innovations or new products.

Keywords diffusion of innovations, early adopter, organizational buying behaviour, decision-making, willingness to cannibalize

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Tiivistelmä

Aiemmat tutkijat ovat yrittäneet selittää varhaista omaksumista innovatiivisuudella, sosio-, demo- ja psykografialla. Näihin tekijöihin perustuva kohdentaminen ja viestintä on johtanut ammattinharjoittajilla epätyytyväisiin tuloksiin markkinalanseerauksissa, kun taas tutkijat ovat onnistuneet selittämään vain rajallisen osan varhaisesta omaksumisesta. Varhaisten omaksujien tunnistaminen sekä paikantaminen on pysynyt miljoonan dollarin kysymyksenä sekä markkinoijille että tutkijoille.

Tämän tutkimuksen tavoitteena oli selvittää, miten organisaation ostokäyttäytyminen ja päätöksenteko vaikuttaa sen taipumukseen olla varhainen omaksuja. Pohjatuen innovaation diffuusion teorioista, varhaisesta omaksumisesta ja ostokäyttäytymisestä koostuvaan kirjallisuuskatsaukseen, laadittu verkkokysely lähetettiin suomalaisten yksilö- ja joukkueurheilulajien yhdistysten johtajille, mikä edusti tutkielman voittoa tavoittelemattomien organisaatioiden kohdeotosta.

Kyselyssä käytetyt mittarit olivat aikaisempien tutkijoiden todentamia, mutta niitä hieman muutettiin parantamaan niiden sopivuutta voittoa tavoittelemattomalle otokselle. 3927:llä lähetetyllä kyselykutsulla saatiin 599 hyväksyttyä vastausta, tuottaen tutkielmalle 15.3%:n vastausprosentin. Aineistolle suoritettiin eksploratiivinen faktorianalyysi, joka johti muutamien kysymysten pois sulkemiseen. Hypoteesit testattiin hierarkkisella moninkertaisella lineaarisella regressioanalyysillä.

Löydökset osoittivat, että organisaatioiden halukkuus kannibalisoida olemassa olevien ostojen arvoa sekä arvostus tavarantoimittajan joustavuutta kohtaan – positiivisesti ennustivat heidän taipumustaan olla varhaisia omaksujia. Lisäksi intuitiivisen päätöksenteon havaittiin voimistavan tavarantoimittajan joustavuuden ja varhaisen omaksumisen välistä positiivista yhteyttä. Tulokset näyttivät myös, että organisaatiot, joilla oli rutinoituneet tavat ostamiseen, osoittivat vähemmän taipumusta olla varhaisia omaksujia, mitä välttelevän päätöksentekotyylin todettiin kiihdyttävän.

Kokonaisuudessaan tulokset tarkoittivat, että johtajien tulisi sisällyttää sekä havainnoida potentiaalisten asiakkaidensa käytöstä tuotekehityksen aikaisten vaiheiden aikana, parantaakseen menestystään markkinalanseerauksissa. Esittämällä yhteyden varhaisen omaksumisen sekä dynaamisten tekijöiden välillä, joita organisaation ostokäyttäytymisen päätöksentekosuuntauksat edustavat, löydökset haastoivat hallitsevan teorian, joka pitää varhaisia omaksujia muuttumattomina olioina.

Tutkielma altistui metodiselle vinoumalle ja joidenkin mittareiden luotettavuus hieman vaarantui niiden sopeuttamisen takia. Löydösten yleistettävyyttä vaatisi tutkimuksen toistamista eriytettyllä aineistonkeruulla toisessa voittoa tavoittelemattomien organisaatioiden tai yritysten otoksessa. Tutkijat voivat myös kehittää uusia mittareita edistääkseen varhaisen omaksumisen tutkimusta vähentämällä teknologian painotusta, sillä se ei ole ainoa innovaatioiden tai uusien tuotteiden muoto.

Keywords innovaatioiden diffuusio, varhainen omaksuja, organisaation ostokäyttäytyminen, päätöksenteko, halukkuus kannibalisoida

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1 Introduction

“Applause, Please, for Early Adopters”, was once written in the New York Times (Darlin 2010). Apple had just sold a million units of their initial version of the iPad, while doubling down on their diffusion speed in comparison to the first iPhone. While consecutively beating their own diffusion speed record and charging impudent premium prices that can be merely explained by the components they use – maybe Apple knew something about early adopters that the rest of the world did not.

Though Apple’s image might be controversial, most marketers would probably enjoy having Apple’s skills and ability of executing product launches. At the same time, most researchers within the marketing field would likely be intrigued to possess equal knowledge and understanding of early adopters that Apple does. Of course, not everyone can be or operate like Apple, whereas that should not be considered as the goal. However, academicians and practitioners would feasibly benefit from catching up at least some of Apple’s lead, by improving their overall comprehension about early adopters.

The initial pioneer customers within a population to buy a new product first, are held as early adopters (Lynn, et al. 2017, 42). The predominant diffusion of innovations theory has had altering perceptions of the role, which early adopters play in affecting the customer acceptance of a new product within its target market (Bianchi, et al. 2017, 635). More recent researchers have suggested that marketers can advance the success of their new product introductions by selling them first to innovators, who engage in activities which help the firm to promote the product for later buyers (Goldsmith & Reinecke Flynn 1992, 42).

The impact of the actions taken by early adopters has been documented to occur in several ways. Early adopters have been reported to express a high tendency of sharing information concerning the innovations they have adopted, to other adopter groups (Moldovan, Steinhart & Ofen 2015, 12). Alternatively, later adopters have also been reported to observe the decisions of early adopters and adjust their own actions sequentially (Walden & Browne 2009, 54-55), a phenomenon which has been distinguished as mimetic or imitative behaviour (Massini, Lewin & Greve 2005, 1550-1551) in an organizational context. Regardless of how the impact takes place, early adopters have been argued to have a central and influential role within successful diffusion of innovations (Midgley & Dowling 1993, 623), whereas locating and identifying these early adopters has become the million-dollar question for marketers (Goldsmith & Reinecke Flynn 1992, 42).

Previous research, which has focused on the diffusion of innovations and early adopters, has commonly assumed that early adopters are static entities within the market (Bianchi, et al. 2017, 635). Consistent with this theory, natural innovativeness (Arts, Frambach & Bijmolt 2011, 141) as well as sub-dimensions of innovativeness (Reinhardt & Gurtner 2015, 139) have been reported as predictors of early adoption. In a similar fashion, personality and personal characteristics have been observed to have an impact on the intention (Marcati, Guido & Peluso 2008, 1587-1588) and readiness (Walczuch, Lemmink & Streukens 2007, 211-212) to adopt innovations. Furthermore, it has been claimed, that an ideal person to adopt new technology is innovative and optimistic, with low discomfort and insecurity (Walczuch, Lemmink & Streukens 2007, 206).

However, earlier research has also revealed that factors, which promote innovation adoption intention, do not respectively always lead to innovation adoption behaviour, while socio-demographics display weak power in predicting early adoption (Arts, Frambach & Bijmolt 2011, 141). In addition, firms with new product launches utilizing traditional targeting practices based on these psycho- and demographics criteria, have faced unexpected failures when attempting to diffuse their innovations within the market (Bianchi, et al. 2017, 635).

From another perspective, a firm's success in a selected target segment has been also argued to depend on the extent it understands how – and possesses the ability – to deliver value to its customers, thereby linking to the fundamental commercial comprehension of the drivers of their buyers' decision processes (Spekman 2015, 91). In addition, to succeed in B2B markets, firms need to understand organizational buying behaviour (Johnston & Lewin 1996, 1), which has been argued to situate in the centre of B2B research (Spekman 2015, 92). Since early adopting organizations have been reported to have distinct organizational buying behaviour in comparison to general organizational buying models (Krishnan & Jayasimha 2021, 1023), the suggested investigation of the connection between early adoption and organizational buying behaviour (Makkonen, Johnston & Javalgi 2016, 2488; Lilien 2016, 549; Krishnan & Jayasimha 2021, 1024) has become more and more important.

Established markets are becoming more crowded and less profitable during the near future (Kim & Mauborgne 2015, 36), whereas globalization has been claimed to cause market turbulence, complicating the chances of succeeding especially for small and medium-sized firms (Knight 2000, 14). To alleviate this situation, managers have been recommended to seek for new market spaces – blue oceans, where competition is inexistent or unnecessary (Kim & Mauborgne 2015, 37).

In turn, researchers have reported that the phenomenon of non-profit organizations (NPOs) having scarce resources, was expected to culminate towards the future, while the distinction between all three sectors has started to fade (Kahnweiler 2011, 84). In fact, NPOs have begun to shift towards business-like organizations (Petitgand 2018, 667-668), whereas the partnerships between NPOs, public, and private sector have steadily proliferated over time (Kahnweiler 2011, 84).

Furthermore, cross-sector collaboration has been expected to become increasingly more frequent (Gazley, Chang & Bingham 2010, 612-613). Therefore, aside from the traditional and well-established B2B and B2C markets, the third sector – mostly consisting of non-profit organizations (NPOs) and voluntary organizations – could be perceived as an emerging, potentially feasible market space.

Then again, previous studies have had an emphasis on for-profit companies, their organizations, or their customers, but the progress of academic research has not been equally advanced concerning the third sector. For example, organizational development (Kahnweiler 2011, 81), market orientation (Vázquez, Alvarez & Santos 2002, 1022), and business tools (Petitgand 2018, 668) – have been stressed of receiving too little attention from a non-profit organization perspective, even though research among these subjects have been thoroughly documented from B2B and B2C aspects. Yet the need to explore the relationship between early adoption and organizational buying behaviour elsewhere than among large enterprises, has been pointed out (Krishnan & Jayasimha 2021, 1024).

This study strives to simultaneously direct attention towards several calls of earlier scholars. First, the conducted research endeavours to answer the call of Garrison (2005, 127-128), with the attempt of advancing the Propensity to be an Early Adopter (PROP) scale of by taking the construct to an environment other than Fortune 1000 or INC 500 firms, to contribute to the revising of the measure.

Second, the study welcomes the encouragement of Sinčić Ćorić, et al. (2017, 235) with the aim of empirically testing the organizational buying behaviour decision approaches (OBBDA) instrument in an alternative industry and country than Croatia and large manufacturing firms. Finally, this paper essays to respond to the calls for developing and testing a measurable model of organizational buying and early adoption behaviour (Makkonen, Johnston & Javalgi 2016, 2488; Krishnan & Jayasimha 2021, 1024).

In conclusion, the research gap and commercial potential of the third sector illustrates an inviting target for academic attention. In addition, it is central for any organization to understand their potential buyers' purchase decision drivers. Lastly, there have been proposals to examine the relationship between early adoption and organizational buying behaviour. Therefore, this study focused on the examination of these more dynamic factors, within a sample of Finnish non-profit sports associations. The research question was phrased as follows:

“How does the organizational buying behaviour and decision-making style impact an organization's propensity to be an early adopter?”

Sufficient examination of the research question carries advancements of undisputed importance for both – practitioners and scholars. For managers, the research provides practical supporting knowledge about the drivers and barriers of early adoption, paired with concrete tools and suggested ways of applying this information, which will help firms improve their success with new product development and market launch activities in the future.

From an academic perspective, this paper progresses academicians' comprehension about the somewhat mysterious concept of early adoption, which for now has been managed to be explained only to a limited extent in quantitative research. Furthermore, the study contributes to the buying models of early adopters, which yet have mostly remained as conceptual within an organizational context. Finally, this research provides support to challenge the perception that predominant theory holds about early adopters, while introducing a set of directions for further studies, which might help future scholars develop a better theoretical grasp of early adoption.

2 Theoretical background

A significant proportion of 40 to 50 per cent of new launched products or services fail (Cierpicki, Wright & Sharp 2000, 777; Castellion & Markham 2013, 978). Similarly, the discontinuance rates of firms after the first five years among founded companies approach 50% (U.S Bureau of Labor Statistics 2016), whereas inappropriate deals to market needs and the ignorance towards competitive positioning and innovations (Ropega 2011, 480) have been reported to be significant reasons for SME failure from a marketing perspective.

Diffusion of innovations has been documented as a conceptual process, which involves identifying, characterizing, and targeting early adopters with suitable communicational, promotional, and distributional tactics (Bianchi, et al. 2017, 635). The early adopters are held as the primary 15 per cent of a given population, who are the first to adopt an innovation (Lynn, et al. 2017, 42). The following groups to adopt an innovation after the “early adopters” are commonly called the “early majority”, the “late majority” and “laggards” (Mahajan, Muller & Bass 1990, 5), in this specific order. Only after the early adopters have accepted the innovation and it has become standardized to some extent, the latter groups will adopt it (Massini, Lewin & Greve 2005, 1552-1553), which acts as the foundation of Roger’s diffusion of innovations theory (Rogers 2003, 282-286).

Theories that aim to explain the process of diffusion of innovations can be categorized into four main classes: probit or rank, epidemic or disequilibrium, bandwagon, and sociological theories (Bianchi, et al. 2017, 622), which highlight the role of social information exchange and the heterogeneity between the adopter groups within the process of diffusion (Van den Bulte & Stremersch 2004, 540; Geroski 2000, 620; Mahajan, Muller & Bass 1990, 1-2).

Despite of the differences in the approaches of these theories, there has been a collective conclusion, according to which early adopters are static entities “somewhere in the market” (Bianchi, et al. 2017, 635). Although early adoption requires two stakeholders; 1) the parties developing the radical product innovations to the market and 2) the parties being among the first customers to try them, this research focuses solely on the latter – organizations acting as potential early adopters.

2.1 Early adoption, innovativeness, and willingness to cannibalize

For the practitioners to be able to understand and approach early adopters, described as unchangeable beings, research has been carried out to untangle the shared characteristics of early adopters. As could be assumed, general innate innovativeness, which embodies the propensity to adopt new products (Arts, Frambach & Bijmolt 2011, 136), has been documented to have a positive relationship with early adoption intention and behaviour on a general level, without a reference to an external context (Arts, Frambach & Bijmolt 2011, 141; Reinhardt & Gurtner 2015, 142; Marcati, Guido & Peluso 2008, 1585).

In addition to general innovativeness, social, functional, hedonic, and cognitive innovativeness – which act as the sub-dimensions of innovativeness – have all been reported to drive early adoption intention (Reinhardt & Gurtner 2015, 142). Furthermore, innovativeness within the context of the individual's specific domain has also been demonstrated to have a positive relationship with early adoption intention (Marcati, Guido & Peluso 2008, 1585-1586), which is coherent with the finding of Reinhardt and Gurtner (2015, 143) that subjective knowledge of a given product category is positively correlated with early adoption intention.

However, from the framework of adoption drivers (Rogers 2003, 223-227), relative advantage, compatibility, complexity, and trialability have been discovered to drive adoption intention, whereas only relative advantage and compatibility drive the realized adoption behaviour (Arts, Frambach & Bijmolt 2011, 141). Surprisingly, complexity, trialability, observability, and uncertainty – the majority of the framework's drivers have been reported as barriers of early adoption behaviour (Arts, Frambach & Bijmolt 2011, 141), which thus represent characteristics that reduce the propensity of early adoption behaviour, even though they had a strong positive relationship with early adoption intention. Since all characteristics that drive early adoption intention might not drive the realized early adoption behaviour respectively, more attention should be directed towards factors, which have a consistent relationship with both early adoption intention and behaviour.

Product involvement – distinct, but closely related to subjective knowledge – which represents the degree of familiarity and importance of a specific product category for an individual (Arts, Frambach & Bijmolt 2011, 136), has been found to consistently drive both, early adoption intention and behaviour (Arts, Frambach & Bijmolt 2011, 141; Reinhardt & Gurtner 2015, 142).

From another perspective, Reinhardt and Gartner (2015, 142-143) have demonstrated that product domain knowledge (information and awareness) and product involvement (emotion and interest) predict early adoption differently between sustaining and disrupting innovations, suggesting that sustaining innovations should be marketed in mainstream channels, whereas disruptive innovations would better succeed from niche channel promotion. Christensen (2006, 51) has portrayed a similar philosophy by stressing that firms should have different lead users when developing sustaining innovations than when developing disruptive innovations.

Therefore, aside from general innovativeness and its characteristics, antecedents that are connected to the product development phase, the subject product category, or the type of innovation to be adopted – could have the potential to improve the comprehension early adoption. Although disruptive and sustaining innovations are not mutually exclusive (Christensen 2006, 40), and the same product can represent a different innovation type to a different group of early adopters (Nagy, Schuessler & Dubinsky 2016, 121), it is arguably probable that the introduced innovation will at least partially overlap with existing offering that the target customer is exposed to. According to this assumption, the early adopters must, to some extent, go through a sacrifice of abandoning their currently used product, to detract its overlap between the innovation they are about to adopt.

The sacrifice of abandoning existing products and diminishing the value of current investments has been captured as a concept of “willingness to cannibalize”, which has been described as a central prerequisite for organizations that desire to introduce radical product innovations to the market (Chandy & Tellis 1998, 481-482; Harmancioglu, Sääksjärvi & Hultink 2020, 52). Additionally, willingness to cannibalize has been reported to have a positive relationship with the extent to which new products are explorative, and future-orientated market scanning (Danneels & Sethi 2011, 1033-1034), closely linking to the concepts of product involvement and innovativeness. These findings justify the argumentation that those potential buyers who demonstrate readiness towards abandoning their current products to enable the acquisition of new innovations, are likelier to be early adopters in comparison to those who express reluctance to discarding currently used products. Therefore, the following is hypothesized:

H1. Willingness to cannibalize will be positively associated with the propensity to be an early adopter.

2.2 Early adoption and organizational buying behaviour

Comprehension of customer firms' buying behaviour has been stressed as a precondition for succeeding in the B2B markets (Johnston & Lewin 1996, 1). Since the success of the market launch of a new product or service depends on its diffusion speed (Kuester, Homburg & Hess 2012, 41), firms are recommended to invest in interacting and distinguishing potential early adopters during the launch process and when diffusing the innovation (Bianchi, et al. 2017, 621-622). Combining the importance of both perspectives, it is arguably crucial for B2B marketers to comprehend the buying behaviour of early adopter firms (Krishnan & Jayasimha 2021, 1010).

Likewise, to the theoretical models of diffusion of innovations, several scholars have suggested organizational buying behaviour models as process-like (Johnston & Lewin 1996, 1-2; Webster & Wind 1972, 19; Bunn 1993, 39-40; Brown, et al. 2012, 509-510; Quintens, Pauwels & Matthyssens 2006, 888). However, the models have remained conceptual with scarce empirical theory testing (Anderson, Chu & Weitz 1987, 71), and lacked a universal typology of organizational buying decision approaches (Sinčić Ćorić, et al. 2017, 227).

Although the characteristics of individual early adopters have been documented as innate and static to some extent (Bianchi, et al. 2017, 635; Arts, Frambach & Bijmolt 2011, 141; Reinhardt & Gurtner 2015, 142; Marcati, Guido & Peluso 2008, 1585), these relationships have not been investigated in an organizational context (Reinhardt & Gurtner 2015, 144). Yet from a practical perspective, it would be challenging for selling firms to target potential early adopter firms, based on the innate characteristics of a given individual on the buyer's side. Even if this was possible, the organizational purchase setting and its related factors result in individual decision makers acting differently, in contrast to when functioning alone (Webster & Wind 1972, 14-16), which weakens the explanatory power of these innate characteristic traits on early adoption in an organizational setting.

In continuation, Leonidou (2004, 740) has suggested that decisions within buying situations could be viewed better within their context. Subjective factors related to early adoption, like product involvement and product domain knowledge (Reinhardt & Gurtner 2015, 142; Arts, Frambach & Bijmolt 2011, 141), are situated arguably closer to the purchase context than innate personal characteristics. Additionally, firms have been recommended to utilize customers with high specific product domain knowledge, when developing innovations for this specific segment (Christensen 2006, 51; Reinhardt & Gurtner 2015, 143), resembling interaction and collaboration between buyer and the supplier.

A similar, collaborative buyer-seller setting has been acknowledged by scholars. Ramaswamy & Ozcan (2018, 203) define value co-creation as “the interplay between interactive agencies”, opening the activities both ways between the entities across the traditional value chain. Much alike, Grönroos & Voima (2013, 140-141) illustrate value co-creation taking place on mutual ground between customers and suppliers, where the real value is created together. Logically, a traditional managerial approach to value co-creation in new product development has been to generate ideas of new products and services by engaging in activities with customers (Frow, et al. 2015, 476).

Closely related to value co-creation, Bogers, Afuah & Bastian (2010, 865) have concluded that firms can involve lead users in the development process to create breakthrough products, by collecting information about their customers’ heterogeneous or specific needs and letting them participate in the modification and improvement of products – and assumed (2010, 863) that such innovative users can play an important role as post-launch adapters. In fact, users with distinct heterogeneous needs, have been reported as willing to pay more than average, to have their distinct needs met (Franke & von Hippel 2003, 1212). Buyers’ appreciation towards suppliers, which demonstrate responsiveness to emerging needs and a possibility to customize products, has been referred to as “supplier flexibility” (Sinčić Ćorić, et al. 2017, 233).

Product involvement and specific domain knowledge has been found to be in a positive relationship with early adoption behaviour, whereas customers are unlikely to encourage their suppliers to develop a product, which they cannot use (Christensen 2006, 51). Coincidentally both – creative lead users involved in the value co-creation of product development (Bogers, Afuah & Bastian 2010, 859-860) and first users in sequence to adopt an innovation (Rogers 2003, 282-283) – are referred to as innovators, despite their different contexts. In addition, Gruner & Homburg (2000, 12) have discovered, that interacting with lead users during the development of new products is in a positive relationship with new product success, whereas the lead users have been portrayed as the first customers to buy a new product or as a reference group for early adopters (Droge, Stanko & Pollitte 2010, 71).

In a B2B environment, this suggests that organizations – which are involved in their suppliers’ development process of new products, or appreciate suppliers, which enable the customizing of their products to accordingly match the buyer organization’s specific needs – are likelier to adopt the resulting innovations of the co-creation process. Thus, the following hypothesis is presented:

H2. Supplier flexibility will be positively associated with the propensity to be an early adopter.

Uncertainty and risks are pervasive traits of radical innovations (Alexander & van Knippenberg 2014, 425; Williams, Rodríguez Sánchez & Škokić 2021, 307). During the development of a radical innovation, the supplier faces interconnected dimensions of uncertainty, which might lead into the discontinuation of development of a given product (O'Connor & Rice 2013, 15-16). Independent to the uncertainties related to the supplier, buying organizations also face adoption risks, associated with the timing, evaluation, and performance of the innovation (Danneels & Kleinschmidt 2001, 360).

The buying organizations' perception of its suppliers' dependability - "supplier reliability", captures the extent, to which buyers value suppliers that are trustworthy, fast, and punctual (Sinčić Ćorić, et al. 2017, 233). Buyer organizations that are willing to reduce their exposure to risks related to their suppliers, tend to favour long-term relationships, to enhance their own legitimacy and position by collaborating with well-known suppliers with a good reputation (Sheth & Shah 2003, 629-630). Such relationships would assumably be challenging for suppliers with radical innovations to intervene. This argumentation supports the proposition of the following hypothesis:

H3. Supplier reliability will be negatively associated with the propensity to be an early adopter.

"Buyer price sensitivity" narrates the importance of a low price in the purchasing setting from the perspective of the buyer (Sinčić Ćorić, et al. 2017, 233). Sheth & Shab (2003, 629) have argued that if purchase decisions are heavily price-orientated, buying organizations have lower desire to maintain relationships with suppliers, whereas they would not hesitate to switch to another supplier, if they offered similar substitutes but at better prices. However, new product innovations with similar performance compared to existing products, but at lower cost, are considered as the least innovative type of innovations (Danneels & Kleinschmidt 2001, 358).

Frattoni et al. (2014, 480) have reported of a case where a supplier used aggressive pricing in the initial phase of product diffusion to drive early adoption, but it did not trigger adoption behaviour within their target segment. In fact, cost saving has been reported as a significant decision driver among late adopters (Manning, et al. 2018, 2328). Vice versa, the risk factor related to the innovation adoption decision process becomes more significant, when the associated costs increase, and the perceived risk of an expensive innovation has been reported to have a negative effect on adoption intention (Gao, Leichter & Wei 2012, 665-666). Hence, the following hypothesis is suggested:

H4. Buyer price sensitivity will be negatively associated with the propensity to be an early adopter.

Krishnan & Jayasimha (2021, 1022-1023) have argued that the buying process of early adopters differs from late adopters, by being a “duplex” buying process that comprises of 1) validation of the acquired innovation in a limited scope, and 2) the subsequent “full-scale” acquisition – which are undertaken to mitigate the risks associated to the innovation adoption. During this buying process, uncertainty is reduced by information search, for example about earlier projects and reference cases (Krishnan & Jayasimha 2021, 1022). Earlier scholars have also projected information search as risk-reducing behaviour within the organizational purchasing context (Mitchell 1998, 462). In general, buyer’s activity of searching for information about suppliers and products has been highlighted as a central part of organizational buying behaviour (Bunn 1993, 47; Moon & Tikoo 2002, 296; Johnston & Lewin 1996, 3; Sheth 1973, 51; Anderson, Chu & Weitz 1987, 72).

A buying organization’s tendency to conduct future purchase decisions based on their earlier experiences, is portrayed as “routine purchases” (Sinčić Ćorić, et al. 2017, 233) – more informally, how inactive the buying organization is within their information search for new suppliers and products. In comparison to Bunn’s (1993, 47) taxonomy of buying decision approaches, “routine purchases” (Sinčić Ćorić, et al. 2017, 233) correspond to casual, routine low priority purchases and simple modified rebuys, which have received lower degree of information search than other buying decision approaches (Bunn 1993, 47), suggesting that high degree of “routine purchases” is equivalent to low degree of information search. However, information seeking has been reported to have a positive relationship with early adoption intention and behaviour (Arts, Frambach & Bijmolt 2011, 138). Consequently, the following hypothesis is expressed:

H5. Routine purchases will be negatively associated with the propensity to be an early adopter.

2.3 Early adoption and the impact of decision-making styles

Whereas the adopter group, in which an individual is situated in, is comprehended as categorical (Rogers 2003, 282-286; Sääksjärvi & Hellén 2019, 587-588; Yi, Fiedler & Park 2006, 403), decision-making styles have not been similarly viewed as mutually exclusive (Berisha, Justina & Krasniqi 2018, 3; Thunholm 2004, 933; Scott & Bruce 1995, 829). Thus, it is assumed that decision-making style does not directly explain the propensity to be an early adopter, but rather influences the relationships between other factors and early adoption propensity.

Early scholars responsible for developing the nowadays well-established measure of individuals' general decision-making style (GDMS) – have reported a positive relationship between intuitive decision-making and innovativeness (Scott & Bruce 1995, 828-829). Since innovativeness represents the innate fundamental characteristic of early adopters (Arts, Frambach & Bijmolt 2011, 141; Reinhardt & Gurtner 2015, 142; Marcati, Guido & Peluso 2008, 1585), the associated connection suggests that intuitive decision-making would positively promote early adoption.

Intuitive decision-making style has also been found to have a strong positive and significant relationship with experiential thinking style (Alacreu-Crespo, et al. 2019, 746), which corresponds with the ability to sense and trust one's impressions and feelings when making decisions (Pacini & Epstein 1999, 974). From early adoption perspective, experiential users with expertise of a given product field are likely to innovate (Bogers, Afuah & Bastian 2010, 862).

Experiential thinking and intuitive decision-making constructs collectively represent emphasis on perceived first impressions made in an interactive manner. Much alike, the supplier-customer value co-creation process has been described as interaction-centred (Grönroos & Voima 2013, 142-143; Rusthollkarhu, Hautamaki & Aarikka-Stenroos 2021, 592), where the value is created in collaboration, based on the customers' experiences and reactions, through continuous interaction and engagement (Park & Lee 2018, 486-487; Grönroos & Voima 2013, 143; 147; Frow, et al. 2015, 473). Since the experiential and interactive nature of value co-creation process has common features with intuitive decision-making and experiential thinking, the following sub-hypothesis is brought forward:

H2a. Intuitive decision-making style will moderate the relationship between supplier flexibility and early adoption, so that the propensity to be an early adopter is greater for those who are high in intuitive decision-making.

Rational decision-making describes, whether individuals search for alternative options in decision-making situations, and logically evaluate them (Scott & Bruce 1995, 820). Furthermore, planning (Curseu & Schrujjer 2012, 1060) and considerate information processing (Fischer, Soyez & Gurtner 2015, 527; Gambetti, et al. 2008, 849; Scott & Bruce 1995, 825) are central qualities of rational decision-making. In a buying context, price-conscious consumers have been reported to associated with planned purchases (Niu 2014, 8), whereas price-sensitive consumers conduct less frequent buying behaviour with less money directed to purchases (Cowart & Goldsmith 2007, 644-645).

In contrast, scholars have reported that low prices may imply to a conception of higher risks related to the product for B2B managers responsible for the purchase decision, especially in the context of high importance, often leading to the selection of the more expensive offering (Saab & Botelho 2020, 149-150). However, choosing a pricier alternative to mitigate purchase related risk conflicts with rational choice models, which assume that actors seek to maximize their expected utility (Saab & Botelho 2020, 150). Then again, the risk factor related to the innovation purchase and adoption decision intensifies, when the associated costs increase (Gao, Leichter & Wei 2012, 665-666).

In summation, risk becomes increasingly present at both ends of the price spread and selecting a more costly option collides with rational decision-making to some extent. Whereas opting the expensive candidate reduces the risk related to the innovation purchase, the approach would appear as inconvenient for rational and price-sensitive managers. In conclusion, the following hypothesis is stated:

H4a. Rational decision-making style will moderate the relationship between price sensitivity and early adoption, so that the propensity to be an early adopter is weaker for those who are high in rational decision-making.

Avoidant decision-making describes the extent, to which individuals attempt to avoid the decision-making situation, by postponing and procrastinating it (Scott & Bruce 1995, 820). Avoidant decision-making has been reported to have a negative relationship with taking initiative, and working hard (Thunholm 2004, 940), suggesting that avoidant decision-makers would be passive and less progressive in comparison to other decision-making styles. Additionally, avoidant decision-making has been positively associated with denial and behavioural disengagement, and negatively associated with openness (Alacreu-Crespo, et al. 2019, 746).

From an early adoption buying behaviour perspective, innovation sensing – becoming aware of innovations by searching for information and interacting with external stakeholders – is a critical initial triggering step of the buying process (Krishnan & Jayasimha 2021, 1017-1018). Characteristics linked to avoidant decision-making suggest that managers with this decision-making style would tend to evade activities that promote innovation awareness and renounce the need for doing so. This assumption closely links to the routinized and passive attitude towards looking for new products and suppliers, which the “routine purchases” buying behaviour dimension resembles. In deduction, the following hypothesis is posed. Figure 1 demonstrates the presented hypotheses and relationships.

H5a. Avoidant decision-making style will moderate the relationship between routine purchases and early adoption, so that the propensity to be an early adopter is weaker for those who are high in avoidant decision-making.

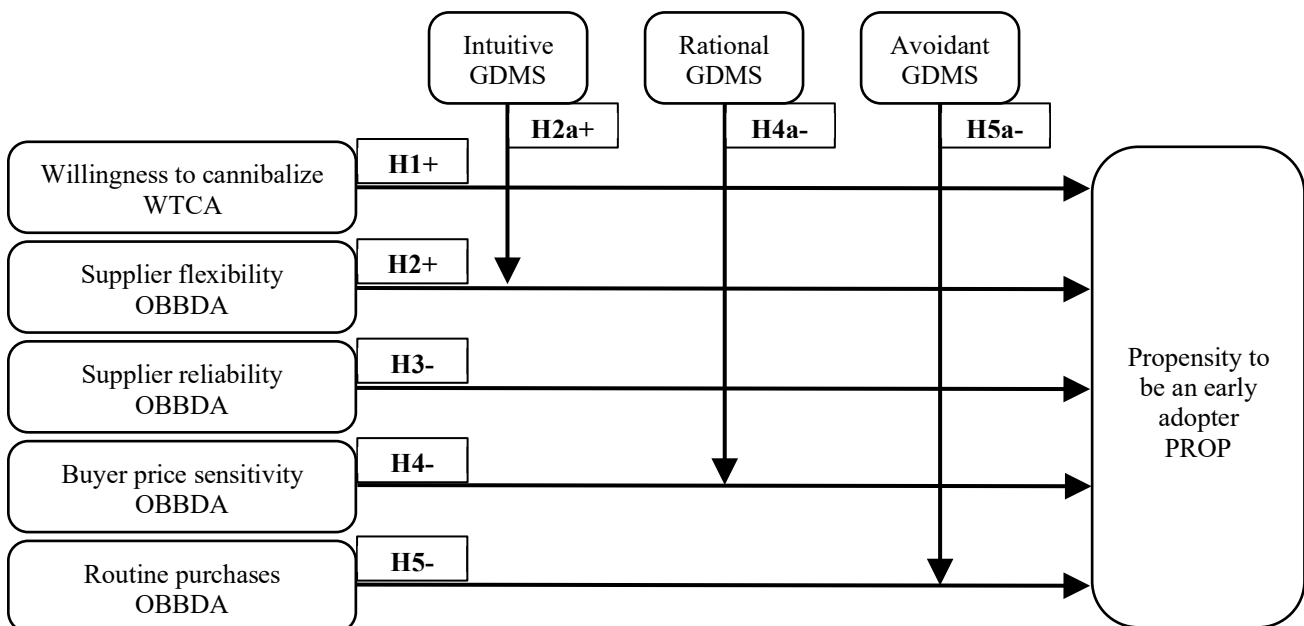


Figure 1. Summative theoretical model of hypothesized relationships.

3 Methodology

The research objective was to investigate, whether dimensions of organizational buying behaviour affect the early adoption propensity of non-profit organizations, and how general decision-making styles influence these relationships. Therefore, the study followed a quantitative correlational research approach, relying on primary data, which was collected directly from the target sample.

3.1 Research context and sample description

Non-profit organizations (NPOs) – also generally understood as the third sector – were the subject of this study. Sampling procedure was initiated by mapping the NPO landscape of Finland (Figure 2). Sport and physical exercise associations represented the second largest main category within the Finnish NPO landscape (PRH 2020b), and was defined as the scope for the research. From this main category, team-sport and individual sport associations were chosen as the final target sample of this study, based on convenience sampling procedure.

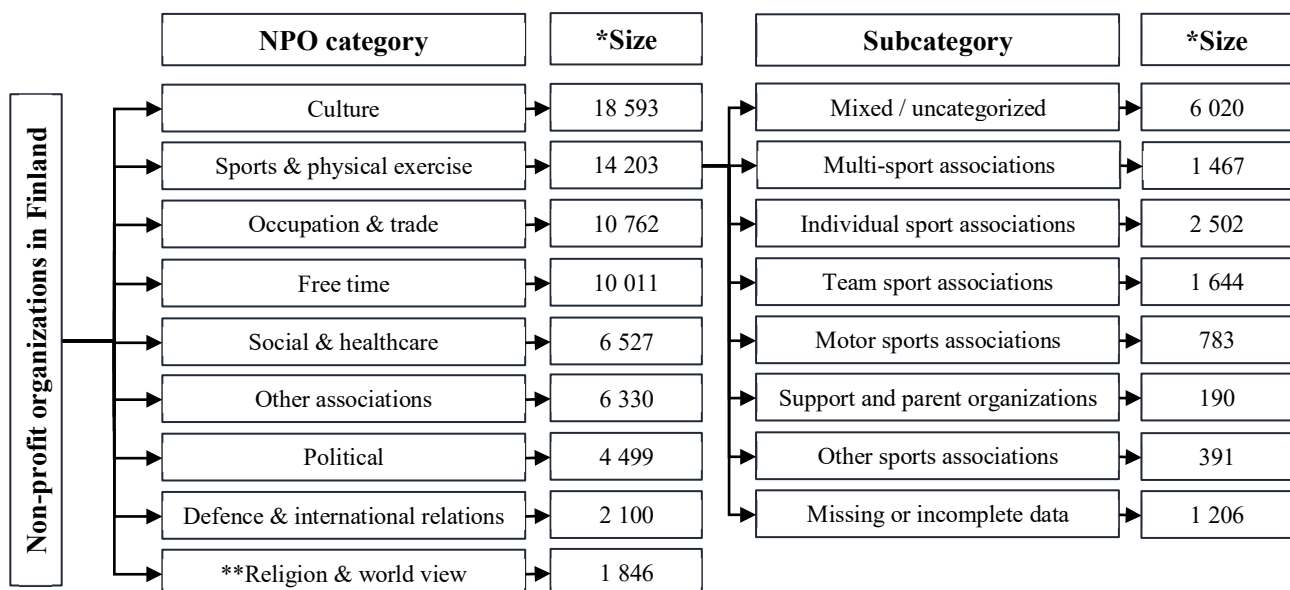


Figure 2. *The non-profit landscape of Finland (PRH 2019; PRH 2020a).*

*Category sizes displayed in the number of organizations.

**Includes 463 “religious communities” associations.

Team and individual sports associations play a significant role within their main category, since the most popular sports are dominated by either team-sports or individual sports (Koski & Mäenpää 2018b, 44), whereas these sub-categories also covered the biggest sports, measured in the number of clubs within the event (Koski & Mäenpää 2018a, 2). Associations that were centralized among a

reasonable number of sports were supposed to result in improved comparability between responses than associations within more disperse and less popular sports that would have demanded controlling for various external factors, which served further justification for selecting these two sub-categories as a target sample. Team sport and individual sport associations covered close to 30% of the whole sports and physical exercise associations category, and 5,5% of the third sector of Finland (Figure 2).

In May 2020, a list of all the Finnish sport and physical exercise associations was requested from PRH (Finnish Patent and Register Office), which responded by providing a chart that included over 90% of the category's associations. The list included the subcategorization labels, which were used as filters to sort out the selected team- and individual sports target sample. This was followed by the acquisition of email addresses of these associations' top managers. Contact information was manually searched from publicly available sources – like homepages, social media pages and head unions' information sources. In the context of this study, board chairmen, vice chairmen, other board members, executive directors, and heads of coaching were equally regarded as top managers of associations, due to the deviation in organizational structures. Contact information of association top managers was sufficiently publicly available, and the acquisition of contact details was considered successful, since 3927 email addresses were obtained from the sample of 4146 organizations.

3.2 Data collection

The initial design of the survey form incorporated all the dimensions within the instruments of organizational buying behaviour, general decision-making style, willingness to cannibalize, and early adoption propensity, translated in Finnish. Subsequently, the primary survey form was reviewed, by consulting five independent sport association managers, within two separate workshops. The main feedback from the revision workshops was that the survey was inconveniently lengthy, certain dimensions were not applicable or relevant to NPO managers, and some of the items demanded adaption, to better correspond with the activities and environment of the sport associations.

Therefore, prior to sending the survey invitations via email, some measures were left out of the survey form, either because of inapplicability reasons, or theoretical justification – which both helped to mitigate the potential risk of too many respondents abandoning the survey due to inconvenience. Altogether, the revision cut the total number of survey items from 58 to 38. Excluded constructs and items are discussed in “Measured variables” section, under their instruments. Appendix 1 displays the sustained and excluded survey items, their adapted versions, and their Finnish translations.

The projected set of primary subjective data was collected with web-based digital surveys, using SurveyMonkey as a tool to gather responses. Web-based surveys were considered as the most suitable way to collect a statistically representative number of responses to form a sufficient dataset for statistical procedures, from the geographically dispersed target sample. In addition, earlier scholars have utilized both, digital and physical surveys to collect data from NPO managers and documented the feasibility of this data collection method, when conducting quantitative research related of the third sector (Arnett, German & Hunt 2003, 96; Vázquez, Alvarez & Santos 2002, 1028-1029; Uzonwanne 2016, 193; Jo 2015, 327; Zhu, Wang & Bart 2016, 317).

The surveys consisted of fundamental demographic questions of the respondent and their organization, as well as the items of all the measured constructs with 7-point Likert scale, which are described in detail in the following chapter. The invitation links to the web-based survey were sent to the respondents into the acquired email addresses between the 29th and 31st of March 2021, alongside with a cover letter (Appendix 2), which briefly explained the aim of the study. Respondents were given the opportunity to subscribe for a report of the study, with the motive of promoting responses. The survey and email invitations were administered in Finnish language.

Respondents were given 14 days to take the survey, and it was closed on the 13th of April. During the two-week period, the survey had collected 622 responses. 18 respondents did not know or want to disclose the number of members within their club, 4 respondents reported to represent other gender than male or female, and one respondent had informed of having 150,000 members in their club, whereas all the other responses were below 5,000 members, thus implying a typing error. The described cases were regarded as incomplete responses or outliers and were therefore removed from the data. As a result, out of the 3927 sent survey invitations, 599 responses were successfully completed and thereby accepted for further analysis, yielding a response rate of 15.3%. Interestingly, 237 subscribed to receive the research report.

3.3 Measured variables

Due to scarce resources and tight schedule allocated for data collection, all the variables were measured with a single web-based survey, which exposed the study to common method bias (Podsakoff, et al. 2003, 886). To mitigate the influence of common method bias, the dependent variable items were situated before independent variable items in the survey. The subsequent items of independent variables were displayed in a randomized order for each respondent. After collecting the data, to assess the extent of common method variance, a Harman's single factor test was conducted with IBM SPSS. The test resulted in loading 13.57 per cent of variance on a single factor, which suggested that common method variance was unlikely present within the collected data (Fuller, et al. 2016, 3196).

3.3.1 Propensity to be an early adopter of disruptive technology (PROP)

The Propensity to be an Early Adopter measures the “degree to which an organization is relatively earlier in the adoption and use of disruptive technologies than other organizations within its industry” (Garrison 2005, 17), which is a construct adapted from the Technology Readiness Index (TRI), previously demonstrated by Garrison (2005, 51). The measure contained four statement items, on which respondents were supposed to take a stand, by selecting the most suitable option from a 7-point Likert scale from 1 = totally agree to 7 = totally disagree (Appendix 1). This construct was held as the dependent variable of the study ($\alpha = .810$).

3.3.2 Willingness to cannibalize (WTCA)

Willingness to cannibalize (WTCA) as a construct aims to measure the extent to which an organization is willing to reduce the actual or potential value of its investments in favour of new technology (Chandy & Tellis 1998, 475; Garrison 2005, 17), which originally included eight items, measured with a 7-point Likert scale (Chandy & Tellis 1998, 485).

However, five items within the construct included references on “new product development”, “manufacturing”, and “product sales” (Chandy & Tellis 1998, 485), which are unfamiliar to the nature of most NPOs. To better promote the application of the scale for the third sector, the study utilized the adaption of the scale down to three items, which had been earlier performed with acceptable values by Garrison (2005, 55). In conclusion, the measure included three reversed items addressed with a 7-point Likert scale, ranging from 1 = totally disagree to 7 = totally agree (Appendix 1).

3.3.3 Organizational buying behaviour decision approaches (OBBDA)

The organizational buying behaviour decision approaches instrument had not been given a name or an abbreviation from its developers (Sinčić Ćorić, et al. 2017) and was thus abbreviated to “OBBDA” for convenience and consistency reasons. The instrument originally included six variables: ‘supplier flexibility’ (5 items), ‘supplier reliability (5 items)’, ‘buyer interdepartmental communication’ (4 items), ‘top management support’ (3 items), ‘routine purchases’ (3 items), and ‘buyer price sensitivity’ (2 items), measured with a 7-point Likert scale.

However, the feedback from independent sports association managers in the survey revision workshop suggested excluding irrelevant constructs, and adapting retained items, to improve their applicability for sports and physical exercise association environment. ‘Top management support’ construct was excluded because top managers were fundamentally the individuals responsible for conducting procurement and purchases within NPOs. Furthermore, ‘buyer interdepartmental communication’ construct was also excluded, relying on the significant size difference between industrial manufacturers and NPOs, in which the existence of different departments was rare. Complying with a similar philosophy to advance instrument applicability, two items were excluded from both – ‘supplier flexibility’ and ‘supplier reliability’ constructs (Appendix 1). Consistently to other constructs within the survey, all constructs within OBBDA were measured with a 7-point Likert scale, ranging from 1 = totally disagree to 7 = totally agree (Appendix 1).

3.3.4 General decision-making style (GDMS)

Decision-making dimensions were measured with the General Decision Making Style (GDMS) instrument, developed by Scott & Bruce (1995). Participants were requested to reflect on their decision-making, by rating the instrument’s items along a 7-point Likert scale, ranging from 1 = totally disagree to 7 = totally agree. The GDMS measure constructed of five variables; rational, intuitive, dependent, avoidant, and spontaneous, each of which consisted of five items (Appendix 1).

Two items of the ‘dependent’ construct had been reported of cross-loading with ‘spontaneous’ (Curseu & Schruijer 2012, 1057), another variable within the instrument. Other scholars had documented issues with the ‘dependent’ measure, related to factor loadings (Loo 2000, 901; Gambetti, et al. 2008, 848), or its applicability to study context (Fischer, Soyez & Gurtner 2015, 526). In addition, ‘dependent’ decision-making was documented of having conflicting, and insignificant correlation with innovativeness and innovative behavior (Scott & Bruce 1995, 829). Since dependent decision-making was

a weak predictor of early adoption and had been reported of cross-loading to some extent, it was excluded from the study.

Based on the feedback received from the survey revision workshop, one item from each of the retained measures was excluded. Exclusion decisions were aimed at items that were known to be problematic in previous research. From the 'rational' variable, item "R2" had had an issue with composite item reliability (Fischer, Soyez & Gurtner 2015, 530). "I4" in the 'intuitive' construct had loading issues when translated to another language (Girard, Reeve & Bonaccio 2016, 328-330). "A4" within the 'avoidant' construct had cross-loaded with an item of the 'dependent' construct (Gambetti, et al. 2008, 848-849). In the 'spontaneous' variable, "S3" had been problematic in the past due to low beta coefficients (Curseu & Schruijer 2012, 1057). All four discussed items were excluded from the survey. Appendix 1 displays the specific contents of retained and excluded items.

3.3.5 Control variables

To promote justified use of controls, only those variables, which use could be theoretically or empirically reasoned for (Atinc, Simmering & Kroll 2012, 59), were measured and included in the analysis. Earlier scholars have reported respondents' demographic variables like age and gender impacting the NPOs' managers decision-making styles (Uzonwanne 2016, 197). Furthermore, age has been documented to influence the likelihood of an individual being an early adopter (Mattila, Karjaluoto & Pento 2003, 518-519), which is why 'age' and 'gender' were regarded as control variables. Age was measured in ranges (25 years or less, 26-30 years...,61 years or more).

The impact that an organization's size has on its level of innovation has possibly been overplayed according to some scholars (Chandy & Tellis 1998, 475), whereas its contributions to understanding drivers of innovation have been scarce. However, since there have been findings for and against about the connection between organization's size, innovation, and early adoption (Garrison 2005, 114), organization's size was selected as a control variable. Altering from the traditional approach of measuring size with financial measures, the number of association's members was used as the measure to predict the NPO's size. Furthermore, number of members was considered as less sensitive data to submit and assumably more generally known data by the NPO employees.

Finally, past research has found, that role tenure of NPO CEOs negatively correlates with their attitude towards change (Musteen, Barker III & Baeten 2006, 609-610), and that role tenure of general CEOs negatively correlates with the amount of performed experimentation (Miller & Shamsie 2001, 734-735). This implies, that when a NPO manager has been recently recruited or promoted, they are likely to have objective and developmental thoughts about their role or their organization, which over time decreases, resulting in reduced propensity to be an early adopter. Therefore, the NPOs' tenure in current role was treated as control variable. Role tenure was measured in ranges of months (12 months or less, 13-24 months..., 73 months or more). As a conclusion, the used control variables for this research were: age, gender, role tenure, and organization's size.

3.3.6 Summary of Exploratory Factor Analysis

A primary exploratory factor analysis was conducted with principal axis factoring extraction method and direct oblimin rotation for 30 items. Table 1 illustrates the results of the initial factor loadings and reliability coefficients. Due to cross-loading issues, 'spontaneous' construct items were dropped since earlier researchers had also reported of having issues with some (Curseu & Schruijer 2012, 1057; Gambetti, et al. 2008, 848-849; Loo 2000, 901; Girard, Reeve & Bonaccio 2016, 329) or all (Fischer, Soyez & Gurtner 2015, 524) of the construct's items.

Additionally, single items from 'supplier reliability' (OBBDA), and 'intuitive' (GDMS) were dropped for having a factor loading lower than .40. Even though past research has widely used ($\alpha > .70$) as the acceptable threshold criterion for Cronbach's alpha coefficients (Lance, Butts & Michels 2006, 205), values above .60 have been regarded as satisfactory or sufficient (Taber 2018, 1279). Therefore, since 'routine purchases' (OBBDA) had a reliability coefficient below the threshold of .60, one item that had a factor loading of .414 was dropped to result in an acceptable reliability coefficient value for exploratory research.

For the final model, the Kaiser-Meyer-Olkin measure verified the sampling sufficiency for the later analysis, $KMO = .760$, whereas the Bartlett's Test of Sphericity was significant ($p < .001$). Eight factors had eigenvalue over Keiser's criterion of 1 and in combination explained 53.82% of the variance in the final model. Since all items loaded on their intended factors, and constructs' reliability assessment resulted in Cronbach's Alpha (α) values, that exceeded the acceptable minimum limit of 0.6 for exploratory quantitative research – there were no scientific justifications to further improve the model, after the removal of the seven items.

Table 1. Summary of the initial exploratory factor analysis.

Construct	Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Dropped
(WTCA) Willingness to cannibalize	My organization finds it difficult to change established procedures in order to adopt new technologies/services. (R)					.471				
	My organization tends to oppose new technologies/services, because it can cause our existing technology/service to become obsolete. (R)					.751				
	We tend to resist adopting new technologies/services that would cause our current investments to lose value. (R)					.719				
(OBBDA) Supplier flexibility	We cooperate only with those suppliers who are willing to customize their offering just for us.		.672							
	We cooperate only with those suppliers who are willing to change their service process just for us.		.773							
	We cooperate only with those suppliers who are willing to change their collaboration procedures just for us.		.863							
Supplier reliability	Only reliable companies can be our suppliers.								-.359	X
	Speed and the punctuality of delivery are important factors that affect our selection of a supplier.								-.583	
	When we make strategic purchase, we cooperate only with those suppliers who can deliver the order in due time.								-.803	
Routine purchases	When making regular/everyday purchases, we rarely ask for new information.							.548		
	When making regular/everyday purchases, we rarely search for new suppliers.							.666		
	In our purchasing decision-making process, suppliers with whom we have had previous experience are better evaluated in relation to those who are unknown to us.							.414		X
Buyer price sensitivity	Price is the most important factor in our purchasing decision.						.775			
	We always choose the suppliers that offer the lowest price.						.634			
(GDMS) Rational	I usually have a rational basis for making decisions.				.566					
	I make decisions in a logical and systematic way.				.599					
	My decision making require careful thought.				.591					
Intuitive	When making a decision, I consider various options in terms of a specific goal.				.562					
	When making decisions, I rely upon my instincts.		.807							
	When I make decisions, I tend to rely on my intuition.		.849							
Avoidant	I generally make decisions that feel right to me.		.357							X
	When I make a decision, I trust my inner feelings and reactions.		.772							
	I avoid making important decisions until the pressure is on.	.803								
Spontaneous	I postpone decision making whenever possible.	.741								
	I often procrastinate when it comes to making important decisions.	.874								
	I put off making many decisions because thinking about them makes me uneasy.	.710								
	I generally make snap decisions.					-.461				X
	I often make decisions on the spur of the moment.					-.517				X
Eigenvale	I often make impulsive decisions.					-.489				X
	When making decisions, I do what seems natural at the moment.		.573							X
Eigenvalue		4.317	2.833	2.008	1.791	1.125	.951	.797	.632	
% of variance explained		14.390	9.444	6.694	5.969	3.750	3.170	2.657	2.106	
Cumulative % of variance explained		14.390	23.834	30.528	36.497	40.247	43.417	46.073	48.179	
Cronbach's alpha		.869	.782	.821	.714	.697	.653	.584	.619	

N=599. Rotated factor loadings are reported. Extraction Method: Principal Axis Factoring; Rotation Method: Oblimin with Kaiser Normalization. One construct and three items were dropped. Cronbach's alpha for 'Spontaneous' would have been $\alpha = .654$.

The items that clustered on the same factor within the final model suggested that factor 1 represented ‘avoidant’ ($\alpha = .869$), factor 2 represented ‘supplier flexibility’ ($\alpha = .821$), factor 3 represented ‘intuitive’ ($\alpha = .851$), factor 4 represented ‘rational’ ($\alpha = .714$), factor 5 represented ‘willingness to cannibalize’ ($\alpha = .697$), factor 6 represented ‘buyer price sensitivity’ ($\alpha = .653$), factor 7 represented ‘supplier reliability’ ($\alpha = .637$), and factor 8 represented ‘routine purchases’ ($\alpha = .604$), concluding the reliability for all independent variables within the study. Table 2 summarizes the factor loadings after rotation, and the reliability coefficients for the final model.

Table 2. *Summary of the final exploratory factor analysis.*

Construct	Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
(WTCA) Willingness to cannibalize	My organization finds it difficult to change established procedures in order to adopt new technologies/services. (R)					.437			
	My organization tends to oppose new technologies/services, because it can cause our existing technology/service to become obsolete. (R)					.806			
	We tend to resist adopting new technologies/services that would cause our current investments to lose value. (R)					.722			
(OBBDA) Supplier flexibility	We cooperate only with those suppliers who are willing to customize their offering just for us.		.670						
	We cooperate only with those suppliers who are willing to change their service process just for us.		.792						
	We cooperate only with those suppliers who are willing to change their collaboration procedures just for us.		.869						
Supplier reliability	Speed and the punctuality of delivery are important factors that affect our selection of a supplier.							.677	
	When we make strategic purchase, we cooperate only with those suppliers who can deliver the order in due time.							.681	
Routine purchases	When making regular/everyday purchases, we rarely ask for new information.								.640
Buyer price sensitivity	When making regular/everyday purchases, we rarely search for new suppliers.								.646
	Price is the most important factor in our purchasing decision. We always choose the suppliers that offer the lowest price.						.701 .706		
(GDMS) Rational	I usually have a rational basis for making decisions.				.626				
	I make decisions in a logical and systematic way.				.646				
	My decision making require careful thought.				.629				
	When making a decision, I consider various options in terms of a specific goal.				.555				
Intuitive	When making decisions, I rely upon my instincts.			.839					
	When I make decisions, I tend to rely on my intuition.			.845					
	When I make a decision, I trust my inner feelings and reactions.			.749					
Avoidant	I avoid making important decisions until the pressure is on.	.807							
	I postpone decision making whenever possible.	.745							
	I often procrastinate when it comes to making important decisions.	.873							
	I put off making many decisions because thinking about them makes me uneasy.	.716							
Eigenvalue	3.973	2.716	2.200	2.021	1.534	1.363	1.179	1.065	
% of variance explained	15.378	10.156	8.002	6.402	4.752	3.743	2.889	2.498	
Cumulative % of variance explained	15.378	25.534	33.536	39.938	44.690	48.433	51.321	53.819	
Cronbach's alpha	.869	.821	.851	.714	.697	.653	.637	.604	

N=599. Final rotated factor loadings are reported. Extraction Method: Principal Axis Factoring; Rotation Method; Oblimin with Kaiser Normalization.

4 Findings

Statistical analyses conducted on the data revealed both negative and positive relationships – also understood as barriers and drivers – between willingness to cannibalize, organizational buying behaviour and early adoption propensity. Furthermore, the NPOs' managers' decision-making style was found to influence these relationships. Findings are presented in reflection with the proposed hypotheses.

4.1 Statistical procedures

Empirical analyses were conducted with IBM SPSS software. Main effect and moderation effect hypotheses were both tested with hierarchical multiple linear regression analysis, in which the relationships of all measured variables were measured simultaneously with one hierarchical model. The model was constructed so that the control variables were entered in the first step, independent variables in the second step, and the interaction terms of certain constructs as moderator variables – in the third and final step within the hierarchical multiple linear regression analysis procedure.

Interaction terms were formed by computing a cross-product variable of standardized values of an independent variable and a moderator variable. Interactions with statistical significance on the dependent variable within the multiple regression model were further visually inspected by graphing them. To statistically evaluate and confirm the significance of the difference between low and high levels of the moderators, simple slope analyses were calculated for hypothesized moderation relationships.

The threat of multicollinearity was assessed by analyzing the collinearity statistics of the hierarchical multiple linear regression model. The highest Variance Inflation Factor (VIF) statistics range in the model resulted in 1.291 and the lowest tolerance statistics range remained at .775, which suggested that multicollinearity was unlikely to compromise the results of the regression model.

4.2 Descriptive statistics

Descriptive statistics and correlations of the dependent variable and all the independent variables are illustrated in Table 3. The gender division among respondents was 64 per cent male, 36 per cent female, whereas the average age of respondents was 47 years (SD = 10.90). On average, respondents had worked in their current NPO position for 3.75 years (SD = 2.25), and the average number of members within their associations was 463 (SD = 629) ranging between 2-4500. The examination of the distribution of organization's size revealed a strong positive skew (2.72) with a Kurtosis value of 9.27 within the data.

Table 3. *Descriptive statistics and correlations of independent and dependent variables.*

Variable	Items	M	SD	1	2	3	4	5	6	7	8	9
1. Propensity to be an early adopter	4	3.54	1.49	1.00								
2. Willingness to cannibalize	3	5.36	1.08	.13**	1.00							
3. OBBDA: Supplier flexibility	3	3.78	1.33	.17**	-.12**	1.00						
4. OBBDA: Supplier reliability	2	5.30	1.10	.14**	.09	.27**	1.00					
5. OBBDA: Routine purchases	2	3.85	1.41	-.12**	-.23**	-.10*	-.01	1.00				
6. OBBDA: Buyer price sensitivity	2	3.39	1.33	-.07	-.19**	.07	-.06	.19**	1.00			
7. GDMS: Rational	4	5.83	0.75	.09*	.18**	-.01	.18**	.04	-.02	1.00		
8. GDMS: Intuitive	3	4.51	1.33	.07	.01	.11**	.07	.03	.05	-.05	1.00	
9. GDMS: Avoidant	4	2.39	1.24	-.11**	-.33*	-.02	-.17**	.18**	.18**	-.26**	.04	1.00

N=599. **Correlation is significant at $p < 0.01$ (2-tailed); *Correlation is significant at $p < 0.05$ (2-tailed).

However, earlier reports have also portrayed the structure of Finnish sports and physical exercise NPOs to be concentrated among associations of smaller size with an average of 359 members, whereas less than 20 per cent of these associations have more than 500 members (Koski & Mäenpää 2018, 2). The skewed distribution of organization's size was therefore considered to truthfully represent the existing natural structure of these organizations.

Furthermore, the other three control variables including gender (-.575), age (-.284), and role tenure (.017) did not show problematic skewness. Thus, the skewed distribution of organization's size was ignored, and in fact the variable turned out to be a central control in later analyses. Values of the propensity to be an early adopter were close to normally distributed with a skewness of .221. Although independent variables showed slight positive or negative skewness ranging from -1.292 to 1.073, the values remained within an acceptable range for samples above 300 respondents.

4.3 Hypothesis testing

Table 4 illustrates the results of the conducted hierarchical multiple linear regression analysis. The relationship between willingness to cannibalize and early adoption propensity was found positive and significant ($\beta = .09$, $p < .05$) at the 95% confidence interval (.003, .216), which provided evidence to support Hypothesis 1. The second hypothesis examined the relationship between supplier flexibility and the propensity to be an early adopter, which was observed as positive and highly significant ($\beta = .13$, $p < .01$) at the 95% confidence interval (.057, .223), which suggested supporting Hypothesis 2. Hypothesis 3 was rejected because the relationship between supplier reliability and the propensity to be an early adopter turned out as slightly positive but statistically insignificant ($\beta = .05$, $p = .239$).

Hypothesis 4 assumed that buyer price sensitivity would be negatively associated with the propensity to be an early adopter, but was also rejected, since buyer price sensitivity demonstrated a low, positive, and insignificant level of correlation with early adoption propensity ($\beta = .02$, $p = .661$). The final main hypothesis anticipated a negative relationship between routine purchases and the propensity to be an early adopter and was observed as negative and significant ($\beta = -.09$, $p < .05$) at the 95% confidence interval (-.164, -.008). Thus, Hypothesis 5 was supported.

The sub hypotheses predicted that decision-making styles moderated the relationships between organizational buying behaviour and the propensity to be an early adopter. Whereas the control variables and independent variables explained a total amount 16.3 per cent of variance, the added moderator variables accounted for an additional 1.6 per cent of variance within the propensity to be an early adopter. Since the third model that observed these relationships was statistically significant ($p < .05$), the null hypothesis for moderated regressions was rejected.

Hypothesis 2a proposed that intuitive decision-making style would enhance the positive relationship between supplier flexibility and early adoption propensity. The conducted hierarchical regression analysis showed a moderately significant positive correlation between the interaction term and the propensity to be an early adopter ($\beta = .07$, $p < .1$) at the 95% confidence interval (-.004, .186). The mapped interaction (Figure 3) was aligned with the hypothesis, whereas a simple slope analysis exhibited that the relationship between supplier flexibility and early adoption propensity was stronger for those who expressed high levels of intuitive decision-making ($\beta = .21$, $p < .01$) than those who expressed low levels of intuitive decision-making ($\beta = .17$, $p < .05$). These findings provided evidence that resulted in the partial supporting of Hypothesis 2a.

Table 4. *Regression and moderated regression results.*

	B	SE B	β	p-value	R ²	ΔR^2	Tolerance	VIF
Step 1								
Constant	2.534	.232		.000				
Age	.024	.026	.037	.364			.886	1.129
Role tenure	.011	.025	.017	.674			.903	1.107
Gender	.309	.115	.106	.007			.965	1.036
Organization's size	.668	.086	.301	.000	.110**		.993	1.007
Step 2								
Constant	.768	.707		.278				
Age	.012	.027	.018	.661			.822	1.216
Role tenure	.008	.025	.013	.744			.893	1.120
Gender	.312	.113	.107	.006			.939	1.065
Organization's size	.620	.086	.279	.000			.965	1.036
Willingness to cannibalize	.102	.054	.079	.061			.803	1.246
OBBDA: Supplier flexibility	.139	.042	.133	.001			.873	1.146
OBBDA: Supplier reliability	.067	.052	.053	.194			.865	1.156
OBBDA: Buyer price sensitivity	.004	.042	.004	.921			.905	1.105
OBBDA: Routine purchases	-.068	.040	-.069	.084			.893	1.120
GDMS: Intuitive	.055	.041	.053	.180			.932	1.072
GDMS: Rational	.096	.075	.051	.202			.881	1.135
GDMS: Avoidant	-.052	.048	-.046	.282	.159**	.053	.788	1.269
Step 3								
Constant	.770	.703		.273				
Age	.013	.027	.020	.637			.821	1.217
Role tenure	.011	.025	.017	.67			.889	1.125
Gender	.317	.113	.109	.005			.937	1.067
Organization's size	.606	.085	.272	.000			.959	1.043
Willingness to cannibalize	.110	.054	.085	.043			.799	1.252
OBBDA: Supplier flexibility	.140	.042	.134	.001			.868	1.152
OBBDA: Supplier reliability	.061	.052	.048	.239			.859	1.164
OBBDA: Buyer price sensitivity	.018	.042	.017	.661			.892	1.121
OBBDA: Routine purchases	-.086	.040	-.087	.031			.872	1.147
GDMS: Intuitive	.062	.041	.059	.131			.928	1.078
GDMS: Rational	.090	.075	.048	.229			.880	1.136
GDMS: Avoidant	-.048	.048	-.043	.317			.775	1.291
Supplier flexibility x Intuitive	.091	.048	.071	.061			.970	1.031
Buyer price sensitivity x Rational	-.081	.048	-.064	.092			.970	1.031
Routine purchases x Avoidant	-.122	.054	-.086	.024	.179*	.016	.961	1.041

N=599. Dependent variable: propensity to be an early adopter. ** = $p < .01$; * = $p < .05$.

The effect of organization's size is displayed in thousands of members.

Hypothesis 4a stated that rational decision-making style would boost the negative relationship between buyer price sensitivity and early adoption propensity. First, the main effect of buyer price sensitivity was revealed as slightly positive and insignificant, whereas the interaction term of rational decision-making style and buyer price sensitivity was only a moderately significant negative predictor of early adoption propensity. Second, the simple slope analysis demonstrated that the relationship between buyer price sensitivity and early adoption propensity was slightly negative but insignificant for those who expressed low levels of rational decision-making ($\beta = -.01$, $p = .85$), whereas only for those who expressed high levels of rational decision-making, the negative relationship reached an acceptable level of significance ($\beta = -.11$, $p < .05$). Considering the insignificant and inconsistent findings among analyses and the unrealized main effect, Hypothesis 4a was rejected.

The final sub hypothesis expected that avoidant decision-making style would intensify the negative relationship between routine purchases and the propensity to be an early adopter. Hierarchical regression analysis displayed a significant negative correlation between the interaction term and the propensity to be an early adopter ($\beta = -.09$, $p < .05$) at the 95% confidence interval (-.227, -.016). The plotted interaction (Figure 3) was in line with the hypothesis. In addition, according to the simple slope analysis, the negative relationship between routine purchases and early adoption propensity was evidently stronger for those with high levels of avoidant decision-making ($\beta = -.22$, $p < .01$) than for those with low levels of avoidant decision-making ($\beta = -.01$, $p = .86$). With respect to the presented findings, there was evidence to support Hypothesis 5a.

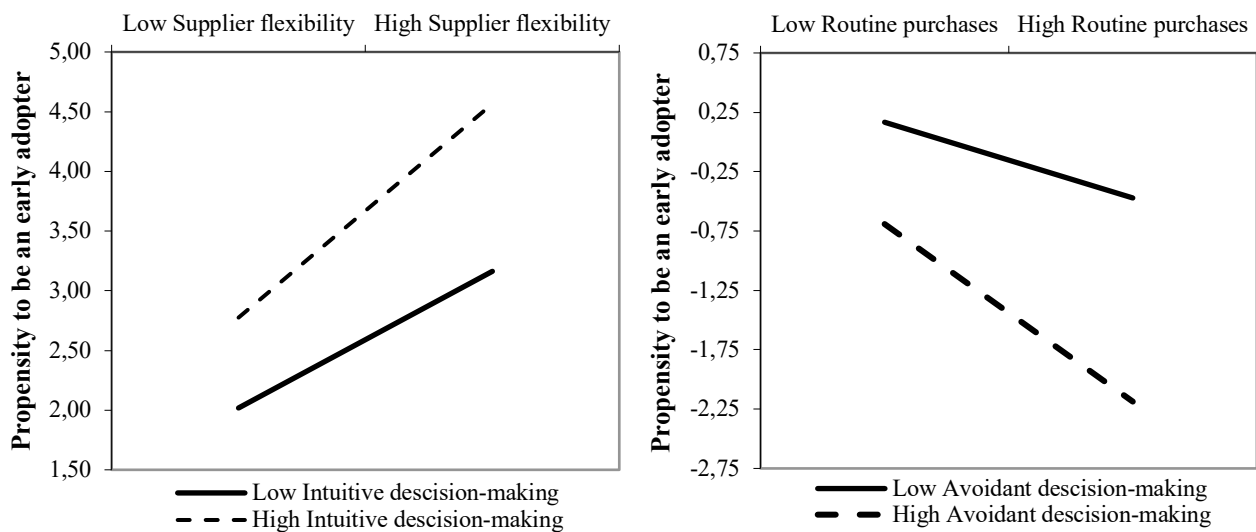


Figure 3. *The effect of decision-making style on buying behaviour-early adoption relationship.*

5 Discussion

The research question of the study was to examine, how decision-making style and organizational buying behaviour impacts a NPOs' propensity to be an early adopter. The results indicated that willingness to cannibalize and supplier flexibility were positively associated with early adoption propensity, whereas high levels of intuitive decision-making strengthened the relationship between supplier flexibility and the propensity to be an early adopter.

Alternatively, the findings also demonstrated that routinized purchasing was negatively associated with early adoption propensity, while high levels of avoidant decision-making style intensified this negative relationship. Supplier flexibility and buyer price sensitivity were not associated with the propensity to be an early adopter, and a significant moderation effect of rational decision-making style remained undiscovered. Findings and their theoretical contributions are contemplated in respective order, followed by practical implications, concluding the chapter with discussing the limitations and providing suggestions for future research.

5.1 New dynamic drivers and barriers of early adopter organizations

On the supplier's side of innovations, willingness to cannibalize has been previously recognized as a central prerequisite for firms aiming to introduce radical product innovations to the market (Chandy & Tellis 1998, 485). It was consequently assumed that when acquiring new solutions, buyer organizations also faced the situation of cannibalization, in which they had to consider the trade-offs between current solutions in comparison to new potential offerings. Relying on the direction of earlier findings, the degree to which organizations were willing to reduce the value of current investments in favour of new solutions – was expected to predict their propensity to be early adopters.

In line with the presented hypothesis, this study expanded the existing theory by demonstrating that willingness to cannibalize is a critical precondition for early adopter organizations, also on the buyer's side in a buyer-seller setting. This finding implies that organizations, which express high levels of willingness to cannibalize, are not committed to the use of prior purchases or bound to the current value of these procurements, and therefore are likelier to be early in adopting new innovations. On the other hand, a low level of willingness to cannibalize might serve as one potential distinctive factor explaining, why buyers do not always progress from intention to behaviour within the early adoption process – an open question posed by earlier scholars (Arts, Frambach & Bijmolt 2011, 143).

Deriving from the conceptual relationships of value co-creation and lead user involvement in product development, it was hypothesized that organizations – which highly appreciate suppliers that are ready to customize their offering to accordingly match their needs – would express greater propensity to be early adopters. As expected, a significant positive was found between supplier flexibility and early adoption propensity. This finding suggests that buyer organizations which tend to request for modifications or tailoring within the products or services they procure, would also possess an increased predisposition to be early adopters.

From a theoretical standpoint, the observed relationship contributes and connects to several earlier findings. First, it further promotes the argumentation that suppliers, which attempt introduce innovations to the market, can – and should use early adopters to estimate and evaluate the potential of their product ideas (Sääksjärvi & Hellén 2019, 597). Second, it responds to the call of previous scholars (Krishnan & Jayasimha 2021, 1024) by introducing quantified evidence, which demonstrates the importance of experimentation and validation of a procurement within the buying process of early adopter organizations.

Supplier reliability, which describes buying organizations' appreciation towards the extent to which suppliers are fast, precise, and punctual with the delivering of procurements – was anticipated to negatively impact their propensity to be early adopters, due to the insuperable existence of risks and uncertainties associated with innovations. Unexpectedly, the relationship was discovered as positive but insignificant, which can be explained by a few alternative theories. Especially in an organizational setting, the development and reiteration processes of innovations and their adoption are time-consuming, which is why the nature of the purchase might impact the exchange orientation (Sheth & Shah 2003, 630-631), situationally increasing the buying organization's tolerance for risks.

On the other hand, uncertainties linked to the speed and punctuality of a supplier might vary between anticipated routine uncertainties and severe showstoppers within the level of criticality (O'Connor & Rice 2013, 15-16), depending on the perceptions of the buyer, thereby reducing the explanatory power of supplier reliability when predicting early adoption propensity. Furthermore, risks linked to innovations have been reported to be mitigated with goal orientated leadership (Alexander & van Knippenberg 2014, 435), as well as cooperation and communication between the buyer and supplier (Williams, Rodríguez Sánchez & Škokić 2021, 303), which suggest that trust between early adopter organizations and their suppliers are built through other factors than punctuality and speed.

Against expectations, buyer price sensitivity did not negatively predict early adoption propensity. This result denotes, that price is not a critical factor for early adopter organizations, even though cost saving has been reported as a purchase driver among later adopters (Manning, et al. 2018, 2328), whereas monetary resources have been found to positively correlate with innovation adoption (Arts, Frambach & Bijmolt 2011, 141; Reinhardt & Gurtner 2015, 142), in the context of consumers. The phenomenon could be explained by the fact that early adopters tend to perceive innovations as more useful in comparison to other adopter groups (Yi, Fiedler & Park 2006, 406), while perceived relative advantage represents the most critical innovation characteristic driving early adoption behaviour (Arts, Frambach & Bijmolt 2011, 141).

Since economic value created is the difference between perceived benefit and cost (Besanko 2013), it is possible that early adopter organizations perceive the potential benefits of acquired innovations as substantial in comparison to the costs of procuring them, implying that changes in prices have marginal effect on economic value created. Another explanatory theory would be that financial costs represent only a fraction of the total transaction costs related to the procurement (Sheth & Shah 2003, 630) of an innovation, and therefore play a minor role within the buying process of early adopter organizations. Although turning out as unanticipated, this finding contributes to more recent theory, according to which early adopter organizations conduct buying behaviour that is distinct from general models (Krishnan & Jayasimha 2021, 1011), but also highlights a difference between the buying behaviour of early adopter individuals and organizations.

As hypothesized, routine purchases were negatively associated with early adoption propensity, insinuating that organizations, which are passive within their activities searching for new information or suppliers, are unlikely to early adopt innovations. This result was consistent with earlier literature, which in turn has documented information seeking (Arts, Frambach & Bijmolt 2011, 140) and product knowledge (Reinhardt & Gurtner 2015, 143) to be positively associated with early adoption.

From another perspective, previous qualitative literature has conceptualized early adopter organizations as continuously involved in activities attempting to produce knowledge about needs and solutions (Makkonen, Johnston & Javalgi 2016, 2483), while having the differentiating ability to visualize auxiliary benefits in addition to the apparent benefits of these solutions (Krishnan & Jayasimha 2021, 1018-1019). The findings of this study contribute to these conceptualizations, by illustrating that organizations with higher propensity to be early adopters are less likely to be inactive within their information searching activities about new products, services, and suppliers.

By pointing out the moderating effect of decision-making styles, this experiment provided additional insight into the relationship between organizational buying behaviour and early adoption propensity. Intuitive decision-making that relies on instincts and feelings, was found to enhance the positive relationship between supplier flexibility and early adoption propensity, uniformly with the hypothesis. The finding reasoned with those of Scott & Bruce (1995, 828), who had reported a connection between intuitive decision-making and innovativeness – the prerequisite for early adopters (Yi, Fiedler & Park 2006, 409; Arts, Frambach & Bijmolt 2011, 141; Reinhardt & Gurtner 2015, 142).

Buyer price sensitivity did not negatively predict early adoption, nor did rational decision-making style accentuate this relationship, against expectations. It has been denoted, that individuals utilize a combination of styles when making important decisions (Thunholm 2004, 933; Scott & Bruce 1995, 829), while a high mean and low standard deviation of rational decision-making within the sample suggests that most respondents apply rational decision-making as one of these combined styles. Being alternately used conjointly with other decision-making styles, would help explain why rational decision-making remained as an insignificant moderator within the model.

Avoidant decision-making style shared the evasive nature of behaviour with routine purchases and was discovered to intensify the negative relationship between routine purchases and early adoption propensity, coherent with the presented hypothesis. The finding implies that managers who conduct routinized purchasing and express high levels of avoidant decision-making, are even less likely to engage in activities searching for new information, products, or suppliers. Since maintaining awareness proactively about needs and solutions has been conceptualized as essential within the buying behaviour of early adopter organizations (Makkonen, Johnston & Javalgi 2016, 2483; Krishnan & Jayasimha 2021, 1019), this finding agreed with the work of earlier scholars.

Overall, the findings of this study challenge the common ground of predominant theory, according to which early adopters are static and given entities “somewhere out there” (Bianchi, et al. 2017, 635). While demographics and targetable characteristics can predict a limited extent of early adoption (Arts, Frambach & Bijmolt 2011, 141), this study suggests scholars a set of more dynamic factors to consider. No organization is an early adopter of every innovation, whereas late adopters among some domains can be early adopters in others (Krishnan & Jayasimha 2021, 1021). Furthermore, organizations can choose how it benchmarks to its competition, which affects whether they innovate or imitate (Massini, Lewin & Greve 2005, 1564). In conjunction with more recent literature, this study argues that the status of early adopter organizations is dynamic and can change or evolve over time.

5.2 Managerial implications

The results of the study can also be transcribed into several practical recommendations for managers, with the goal of improving the development of new innovations and the success with their market launch activities. The findings illustrated that buyer organizations undergo the process of considering, whether to keep or abandon the existing procurement, when faced with a new product or innovation, referred to as their extent of willingness to cannibalize. Organizations that displayed higher willingness to cannibalize also expressed a higher propensity to be an early adopter.

Hence, during need recognition and sales presentations, managers are recommended to sense, observe, or even ask, how committed their clients or potential customers are to their current solutions, as this partially indicates their propensity to adopt new offerings. On the other hand, managers who detect high levels of willingness to cannibalize among their existing customers – are advised to keep closer contact towards these clients to prevent them from churning or adopting an innovation from rival suppliers.

In line with the literature of value co-creation and lead user involvement in product development, managers of firms that attempt to introduce innovations to the market, should incorporate potential future customers in the early phase during the development of these products. By doing so, the firms gain an opportunity to monitor the behaviour their customers.

Actively participating customers who recommend modifications or suggest improvements to the product are likely to appreciate their supplier's flexibility. Therefore, they should be "ear-marked" as potential early adopters and reinvolved in this process during future innovation development, to continue such beneficial collaboration. Furthermore, the involved customers actively participating in this process, are also likelier to become early adopters of this product, later when it is launched.

On the contrary, passive customers with equivocal interaction and few ideas for product progression, should also be flagged, but as potential later adopters, whereas they should be replaced with other participants the next time when innovation development is initiated. However, this does not diminish their role as customers for the firm and should be treated equally as per firm standards.

Managers are suggested to keep track of the frequency and nature of the requests for additional information about their offering. In addition to normal demand, regularly occurring information requests from same customers are a strong indicator of buying behaviour opposite to routinized purchasing, thereby predicting their increased propensity to be early adopters of future innovations. Subsequently, especially such customers should be targeted and directed with promotional marketing communications when new products are launched.

Since early adopter organizations were not found price sensitive, managers are recommended not to give up on margins or use aggressive pricing when launching new products or innovations to the market. Assuming that prices are dropped as diffusion curve unfolds, managers should in fact strive to charge premiums during, and for some time after launch. Expressing high price levels as risky is more typical for later adopters, whereas the unlikely uncertainty among early adopters should be addressed with additional emphasizing on benefits and value potential, rather than cutting the price.

5.3 Limitations and directions for further research

The nature of the study resulted in exposing it to a few limitations, which on the contrary offer opportunities and propositions for future research. First, the selected convenience sample of team and individual sport associations in Finland poses a limitation to the extent of how generalizable the findings are within the third or moreover, in the private sector.

Second, since the data was collected with a single self-reported survey, the study was subject to common method bias, although the risk of this was assessed. To enable improved generalizability, a replicative study can be conducted within another NPO category or a sample consisting of firms, preferably with separated data collection of independent and dependent variables.

Although literature suggests that the borders between the three known sectors are blurring and that these are approaching each other, NPOs are still distinct from firms, which resulted in some constructs and items being inapplicable for the third sector per se due to their phrasing or references. Therefore, several items were altered or adapted from their original format to fit them accordingly for the sample, which compromised the reliability of the instruments.

Furthermore – although innovations and new products occur also in various other forms – literature and measures have mostly emphasized the connection of early adoption and disruptive technology. However, this approach can only reach a limited extent of understanding the concept of early adoption in all its dimensions. To address both presented issues, future research is suggested to develop general typology or adaptive measures, which perform accurately and reliably within different industries and product domains.

Despite of the contributions of this study, the model of buying behaviour of early adopter organizations requests further progressing. It was beyond the scope of this study to observe early adoption from both perspectives – incumbent firms and potential new entrants. Since the study focused on mostly those factors that are exclusively observable for incumbent suppliers gained from customer interaction and relationships, there is a limitation to the extent to which this model can be applied from the perspective of new market entrants.

Additionally, the study comprised a fraction of all the generally known relevant factors affecting organizational buying behaviour, leaving room for developing the comprehension about the complex buying decision process of early adopter organizations as well. Traditional and well-researched factors among marketing literature like, customer satisfaction, financial firm performance, market share and brand attributes are recommended to be included in the model within further research.

Finally, as all three included decision-making style variables did not directly correlate with the dependent variable of the study, this paper investigated decision-making as a moderating variable within the relationship of organizational buying behaviour and early adoption. Moreover, the study considered the propensity to be an early adopter as the sole dependent variable within the analysis of the data. Therefore, hierarchical multiple linear regression analysis was selected as the analytic procedure over structural equation modelling, when testing the hypotheses.

In continuation, mediation was defined outside the extent of this study, whereas this approach resulted in a limited spectrum of measured effects. However, the mediating role for the excluded dependent and spontaneous decision-making styles cannot be ruled out. Future research may take a distinct approach by including a different decision-making instrument, while employing structural equation modelling as the data analysis method – to investigate whether decision-making style holds a mediating role among explaining early adoption.

6 Conclusion

In previous research, personal characteristics have been able to explain a limited amount variance in early adoption, while the application of traditional targeting and tactics have led to unsuccessful market launches of innovations. To provide additional insights for practitioners for succeeding with new product launches and help researchers better understand the predictors of early adoption, this study aimed to investigate the effects of organizational buying behaviour and decision-making style on an organization's propensity to be an early adopter. Based on the quantitative analysis of data collected from Finnish team and individual sport associations' managers, new drivers and barriers for organizational early adoption were identified.

The results indicated that organizations who appreciate a higher degree of supplier flexibility, show a greater propensity to be early adopters. Indirectly built and applied from previous theory among value co-creation and lead user involvement, this finding was aligned with earlier literature. Having a connection to innovativeness, intuitive decision-making style was observed to fuel the positive relationship between supplier flexibility and early adoption propensity.

Finding new suppliers or requesting for new information rarely was described as routinized purchasing by the literature. This study found routinized purchasing to negatively predict an organization's propensity to be an early adopter, while avoidant decision-making style was acknowledged to logically accelerate this relationship.

While price sensitivity and the respect towards a supplier's reliability in terms of punctuality were not observed to significantly influence an organization's propensity to be an early adopter, this study provided supporting evidence to the statements of earlier scholars, claiming that the buying behaviour of early adopter organizations differs substantially from general buying models.

From a theoretical perspective, the quantitative approach responded to the calls of several earlier researchers, by measuring and verifying some relationships, which have been conceptualized in models within qualitative research. However, by suggesting a more dynamic approach, the results supported the challenging of predominant theory, which perceives early adopters as static entities. Although this study shed new light on the distinct buying behaviour of early adopter organizations, further research is necessary to measure and understand the complex status of early adoption.

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Appendices

Appendix 1. Original, adapted and translated survey items

Item code	Original English version	Adapted English version	Translated Finnish version
Propensity to be an early adopter of disruptive technology (PROP), (Garrison 2005)			
PROP1	Other organizations come to us for advice on disruptive technologies.	Other organizations come to us for advice on new technologies/services.	Toiset organisaatiot kysyvät meiltä neuvoa uusista teknologioista/palveluista
PROP2	My organization enjoys the challenge of finding uses for disruptive technologies.	My organization sometimes faces challenges, which could be solved with new technology/services.	Organisaatiomme kohtaa ajoittain haasteita, joiden ratkaisemiseen uusia teknologioita/palveluita voisi hyödyntää.
PROP3	In general, my organization is among the first in its industry to acquire disruptive technologies when little is known about the technology's uses.	In general, my organization is among the first in its industry to acquire new technologies/services, even if little is known about their uses.	Yleisesti ottaen, organisaatiomme on alallamme ensimmäisten joukossa hankkimassa uutta teknologiaa/palveluita, vaikka niiden käytöstä ei ole vielä paljoakaan tietoa.
PROP4	In general, my organization is among the first in its industry to acquire disruptive technologies when little is known about the technology's value.	In general, my organization is among the first in its industry to acquire new technologies/services, even if little is known about their value/benefits.	Yleisesti ottaen, organisaatiomme on alallamme ensimmäisten joukossa hankkimassa uutta teknologiaa/palveluita, vaikka niiden arvosta/hyödyistä ei ole vielä paljoakaan tietoa.
Willingness to cannibalize (WTCA), (Chandy & Tellis 1998)			
WTCA1	My organization finds it difficult to change established procedures in order to adopt a disruptive technology. (R)	My organization finds it difficult to change established procedures in order to adopt new technologies/services. (R)	Organisaatiomme kokee vaikeaksi muuttaa totuttuja käytäntöjä omaksuakseen uutta teknologiaa tai uusia palveluita.
WTCA2	My organization tends to oppose disruptive technology because it can cause our existing technology to become obsolete. (R)	My organization tends to oppose new technologies/services, because it can cause our existing technology/service to become obsolete. (R)	Organisaatiollamme on tapana vastustaa uutta teknologiaa/palveluita, koska se voi aiheuttaa käyttämämme olemassa olevan teknologian/palveluiden käytöstä poistumiseen.
WTCA3	We tend to resist adopting disruptive technologies that would cause our current investments to lose value. (R)	We tend to resist adopting new technologies/services that would cause our current investments to lose value. (R)	Meillä on tapana vastustaa uusien teknologioiden/palveluiden omaksumista, koska se voisi aiheuttaa nykyisten investointien arvon menettämisen.
Organizational buying behaviour decision approaches (OBBDA), (Sinčić Čorić, et al. 2017)			
SF1	We cooperate only with those suppliers who are willing to customize their products according just for us.	We cooperate only with those suppliers who are willing to customize their offering just for us.	Teemme yhteistyötä vain sellaisten palveluntarjoajien kanssa, jotka ovat halukkaita räätälöimään tarjontansa juuri meitä varten.
SF2	We cooperate only with those suppliers who are willing to change their production processes just for us.	We cooperate only with those suppliers who are willing to change their service process just for us.	Teemme yhteistyötä vain sellaisten palveluntarjoajien kanssa, jotka ovat halukkaita muuttamaan palveluprosessiaan juuri meitä varten.
SF3*	We cooperate only with those suppliers who are willing to change their inventory procedures just for us.		
SF4	We cooperate only with those suppliers who are willing to change their delivery procedures just for us.	We cooperate only with those suppliers who are willing to change their collaboration procedures just for us.	Teemme yhteistyötä vain sellaisten palveluntarjoajien kanssa, jotka ovat halukkaita muokkaamaan yhteistyökäytäntöjään juuri meitä varten.
SF5*	We cooperate only with those suppliers who are willing to invest in tools and equipment just for us.		
SR1*	Our company uses information technology well to exchange information with suppliers.		
SR2	Only reliable companies can be our suppliers.		Vain luotettavat yritykset voivat olla meidän palveluntarjoajia tai tavarantoimittajia.
SR3*	Purchase is the most likely to be made from those suppliers who are ready to adjust to our requirements.		
SR4	Speed and the punctuality of delivery are important factors that affect our selection of a supplier.		Nopeus ja toimituksen täsmällisyys ovat tärkeitä tekijöitä, jotka vaikuttavat palveluntarjoajan tai tavarantoimittajan valintaan.
SR5	When we make strategic purchase, we cooperate only with those suppliers who can deliver the order in due time.		Kun teemme strategisen hankinnan, teemme yhteistyötä vain sellaisten kumppanien kanssa, jotka pystyvät toimittamaan tilauksen aikataulussa.
BIC1*	Our company is organized in such a way that information important for purchasing decision are available and delivered without any restrictions.		
BIC2*	Various functional departments in our company interact during the purchasing process.		
BIC3*	In our company, there is a tradition of good communication between departments that directly or indirectly participate in the purchasing process.		
BIC4*	In our company, managers of different departments/functions are expected to share key information that is essential for successful purchasing.		
TMS1*	In this company purchasing is considered a vital part of our corporate strategy.		
TMS2*	Top management is supportive to our efforts to improve the purchasing department.		
TMS3*	Purchasing's views are considered critical in most top managers' eyes.		

RP1	When we purchase routine products (i.e. office or cleaning utensils), we rarely ask for new information.	When making regular/everyday purchases, we rarely ask for new information.	Kun teemme tavanomaisia/arkisia hankintoja, kysymme harvoin uutta tietoa.
RP2	When we purchase routine products (i.e. office or cleaning utensils), we rarely search for new suppliers.	When making regular/everyday purchases, we rarely search for new suppliers.	Kun teemme tavanomaisia/arkisia hankintoja, etsimme harvoin uusia palveluntarjoajia tai tavarantoimittajia.
RP3	In our purchasing decision-making process, suppliers with whom we have had previous experience are better evaluated in relation to those who are unknown to us.		Tavarantoimittajat tai palveluntarjoajat, joista meillä on aikaisempaa kokemusta, arvioidaan tuntemattomia tavarantoimittajia paremmiksi hankintojemme päätöksentekoprosessissa.
BPS1	Price is the most important factor in our purchasing decision.		Hinta on tärkein hankinnan päätöksentekoon vaikuttava tekijä.
BPS2	We always choose the suppliers that offer the lowest price.		Valitsemme aina ne tavarantoimittajat tai palveluntarjoajat, jotka tarjoavat alhaisimman hinnan.
General decision-making style (GDMS), (Scott & Bruce 1995)			
R1	I usually have a rational basis for making decisions.		Minulla on useimmiten järkevä perusta päätöksien tekemiselle.
R2**	I double-check my information sources to be sure I have the right facts before making decisions.		
R3	I make decisions in a logical and systematic way.		Teen päätöksiä loogisella ja systemaattisella tavalla.
R4	My decision making require careful thought.		Päätöksentekoni edellyttää harkitsevaista ajattelua.
R5	When making a decision, I consider various options in terms of a specific goal.		Kun olen tekemässä päätöstä, harkitsen useita eri vaihtoehtoja tavoitteisiimme nähden.
I1	When making decisions, I rely upon my instincts.		Kun olen tekemässä päätöksiä, luotan vaistoihini.
I2	When I make decisions, I tend to rely on my intuition.		Kun teen päätöksiä, minulla on taipumusta luottaa intuitiooni.
I3	I generally make decisions that feel right to me.		Teen yleisellä tasolla päätöksiä, jotka tuntuvat minusta oikeilta.
I4**	When I make a decision, it is more important for me to feel the decision is right than to have a rational reason for it.		
I5	When I make a decision, I trust my inner feelings and reactions.		Kun teen päätöksen, luotan sisäisiin tuntemuksiini ja reaktioihini.
D1**	I often need the assistance of other people when making important decisions.		
D2**	I rarely make important decisions without consulting other people.		
D3**	If I have the support of others, it is easier for me to make important decisions.		
D4**	I use the advice of other people in making my important decisions.		
D5**	I like to have someone to steer me in the right direction when I am faced with important decisions.		
A1	I avoid making important decisions until the pressure is on.		Vältän tärkeiden päätösten tekemistä, kunnes niistä alkaa muodostua painetta.
A2	I postpone decision making whenever possible.		Lykkään päätöksen tekemistä, jos se vain suinkin on mahdollista.
A3	I often procrastinate when it comes to making important decisions.		Viiyvytellen usein tärkeiden päätösten tekemisen kanssa.
A4**	I generally make important decisions at the last minute.		
A5	I put off making many decisions because thinking about them makes me uneasy.		Siirrän monien päätösten tekemistä, koska niiden ajattelu minua vaivautuneeksi.
S1	I generally make snap decisions.		Teen yleisellä tasolla päätöksiä pikaisesti.
S2	I often make decisions on the spur of the moment.		Teen usein päätöksiä hetken mielohteesta.
S3**	I make quick decisions.		
S4	I often make impulsive decisions.		Teen usein impulsiivisia päätöksiä.
S5	When making decisions, I do what seems natural at the moment.		Kun olen tekemässä päätöksiä, teen sen mikä tuntuu luonnolliselta sillä hetkellä.

Note. Item code abbreviations apply as follows: SF=Supplier flexibility, SR=Supplier reliability, BIC=Buyer interdepartmental communication, TMS=Top management support, BPS=Buyer price sensitivity, RP=Routine purchases, R=Rational, I=Intuitive, D=Dependent, A=Avoidant, S=Spontaneous

*Excluded due to inapplicability reasoning in sample's context.

**Excluded due to theoretical reasoning.

Appendix 2. Survey invitation email cover letter

[English]

Subject: I would invite you to respond to a survey about sport and physical exercise clubs

Message: Dear sports or physical exercise club decision-maker/representative,

I'm studying in Aalto university and working on my Master's thesis, which discusses buying behaviour and decision-making of Finnish sports and physical exercise clubs. The study aims to investigate, which decision-making and buying behaviour models occur among the clubs' decision-makers and representatives, and how procurements are viewed.

To produce my research data, I would kindly invite you to respond into the enclosed survey, which takes approximately 5 minutes to complete. The responses will be utilized in conducting the statistical analysis of the research. Respectively, the research aims to advance the status of sports and exercise clubs, by increasing the awareness about the operations of these organizations. The survey is taken anonymously, and respondents can not be identified based on their responses. By clicking the link below, you will be forwarded to fill in the survey.

survey link

Warm thanks already beforehand for taking the survey. The results of the survey will be significantly helpful from the perspective of my research. Those who are interested, can subscribe to receive a summarized report of the research, by typing in their email address to last question of the survey. I wish a pleasant spring for your club!

With kind regards,
Jere Vitikka
author's email address
author's phone number
author's LinkedIn-profile link

[Finnish]

Subject: Pyytäisin teitä vastaamaan urheilu- ja liikuntaseuroja koskevaan kyselyyn

Message: Arvoisa urheilu- tai liikuntaseuran päättäjä/edustaja,

Työstän Aalto yliopistossa maisterivaiheen Pro Gradu -tutkielmaani, joka käsittelee suomalaisten urheilu- ja liikuntaseurojen päätöksentekoa sekä ostokäyttäytymistä. Tutkimuksella pyritään selvittämään, millaisia päätöksenteon ja ostokäyttäytymisen malleja seurojen päättäjillä ja edustajilla esiintyy, sekä miten hankintojen tekemiseen suhtaudutaan.

Tutkimusaineistoni aikaansaamiseksi pyytäisin teitä ystävällisesti vastaamaan oheiseen kyselyyn, jonka täyttämiseen menee n. 5 minuuttia. Vastauksia tullaan hyödyntämään tutkimuksen tilastollisen analyysin tekemiseen. Vastaavasti tutkimuksella pyritään kehittämään liikunta- ja urheiluseurojen asemaa lisäämällä tietoisuutta näiden organisaatioiden toiminnasta. Kyselyyn vastataan nimettömästi, eikä vastaajia voida tunnistaa vastausten perusteella. Klikkaamalla oheista linkkiä, pääsette vastaamaan kyselyyn.

kyselyn linkki

Lämmin kiitos jo etukäteen vastaamiseen käyttämästänne ajasta. Kyselyn tuloksista on merkittävä apu tutkielmani näkökulmasta. Halukkaat saavat itselleen myös kootun raportin tutkimuksesta, kirjoittamalla sähköpostiosoitteensa kyselyn viimeiseen kysymykseen. Tsemppiä ja mukavaa kevättä seurallenne!

Ystävällisin terveisin,
Jere Vitikka
tekijän sähköpostiosoite
tekijän puhelinnumero
tekijän LinkedIn-profiilin linkki