Transaction Costs in Voluntary Social Organisations

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Abstract

The increasing use of targeted social investments has led to relevant research interest in the transaction costs of social efforts. However, the majority of the research is characterised by the following two challenges: first, the analyses are often limited to public sources of revenue and, therefore, exclude private sources; and second, the transaction costs are measured based on self-declared information about administrative costs.

The article contributes to the field of research in two ways. First, the contribution is made through an analytical model that brings together private and public revenue streams in a single model, providing a unique opportunity to compare the transaction costs from these two sources. Second, in this article, transaction costs are measured based on the actual development in the number of administrative academic full-time equivalents (FTEs) in the organisations. The latter attribute also achieves a better link to the theory in the field, which precisely focuses on administrative employees.

The article derived data from a longitudinal dataset for 2012–17 with the accounts for revenue in the nationwide voluntary social organisations and register data from Statistics Denmark on the education and working hours of employees in organisations. The article finds that targeted project funds (that is, earmarked funding) from private sources have significantly higher transaction costs than government project funds and general public operating grants. Smaller organisations were also shown to generally have higher costs when striving to secure funding than larger organisations with economies of scale.

Keywords: social finance, voluntary organisations, voluntary failures, social investment

1. Introduction

The financing landscape of voluntary social organisations in Denmark has changed in recent decades. There have been more temporary, earmarked project grants due to increased financial support from private foundations and more project-oriented grants from state authorities (Clausen, 2021). This development in Denmark parallels international development, where earmarked project grants and social investments from private and public sources replace general grants, primarily consisting of so-called unrestricted revenue, whose use is determined by organisations in their mission statements (Salway, 2017). However, there is considerable disagreement among researchers and practitioners alike regarding the reasons behind this development and the assessment of the organisational consequences.

Critical observers mainly focus on the increased use of earmarked grants, which they feel have contributed to the bureaucratisation of the organisations (Espersen et al., 2018). This can be attributed to greater demands on organisations in the form of documentation and formalisation of consultancy efforts and increased competition for scarce project funding. To cope in this landscape, organisations have increased their bureaucratic capacity by hiring more employees with academic backgrounds. Seen through the eyes of an economist, these are increased transaction costs in the form of personnel costs for preparing applications, negotiations with funding bodies and authorities, ongoing monitoring, control of acquired grants and continuous and time-consuming cooperation with the authorities extending the grants (FitzGerald et al., 2019; Never & Leon, 2017; Wiley & Berry, 2018). From a broader perspective, the criticism also refers to how this increasingly earmarked funding renders the organisations less welcoming for volunteers (Henriksen et al., 2008; Smith, 2018) and changes the organisational character from a solidarity ethos to professionalised and competitively oriented supplier (Milbourne & Murray, 2017), which, in turn, can also undermine the role of organisations as popular 'schools of democracy' (Putnam, 2015; Whitfield, 2014).

This criticism was challenged by Mulgan (2015), who claimed that voluntary social organisations have generally been better at promising than delivering results. However, earmarked project funding and the subsequent higher requirements for organisation delivery represent an opportunity to qualify the efforts through better-planned aid programs, including better knowledge of the target groups' problems and needs. This will increase the quality of the aid and scale up efforts so that more people can be helped (Ejler, 2015). It has also been argued that bureaucratisation naturally increases with the age of the organisation and cannot be directly attributed to funding alone (Kramer, 1990). The derived organisational consequences are not given, but they depend on managerial choices and actions (Kramer, 1994), including the ability of organisations to choose other activities that do not collide with the funding requirements (Lichterman & Eliasoph, 2014).

This article examines the connection between funding and the extent of administrative FTEs with an academic background (hereafter: administrative academic FTEs) in nationwide voluntary social organisations in Denmark. Several international studies have been conducted in this area, but the vast majority focus on the development of administrative costs as a result of government contracts and projects (Dudkin et al., 2005; Frumkin & Kim, 2002; Pandey et al., 2018; Thornton & Lecy, 2022; Warburton et al., 2018). This is an inappropriate restriction, as the organisations studied derive 47 per cent of their revenue from the state and 53 per cent from private sources (Clausen, 2021).

This article contributes to this field of research in three areas. First, the article brings together the exploration of private and public revenue sources into one model, providing a unique opportunity to compare the transaction costs of these two sources. Second, the article measures transaction costs based on the increased number of administrative academic FTEs in the organisations. This is a methodological improvement compared to the studies that have measured the transaction costs based on the organisations' self-declared administration ratio. Simultaneously, this method provides a better link to the theory in the field, which focuses on administrative employees. However, this choice also entails methodological challenges, which are reviewed in Section 3. Third, the empirical foundation of the article consists of a panel data set, which enables better analyses of the connection between the funding sources and the number of administrative academic FTEs than what can be derived from single-year analyses.

The article is based on analyses of nationwide voluntary social organisations in Denmark, from which audited accounts and register data on the number of administrative academic FTEs from 2012 to 17 have been collected. At the end of the period under scrutiny, these organisations had a combined annual turnover of \$0.5 billion, 15,800 paid employees and just over 81,000 volunteers. In the examined period, the proportion of academic administrative staff in the examined organisations increased by 25 per cent, constituting 4.6 per cent of the total workforce in 2017. These figures are at par with the development in the public sector in Denmark, where the percentage of employees with an academic degree in the social sciences increased by 31 per cent from 2010 to 16, constituting 5 per cent of total employment in 2016 (Christensen et al., 2017).

Despite the significant number of paid and voluntary workers, it is essential to know that the investigated organisations only represent a small part of the total number of organisations in the civil sector. Focusing on national organisations also entails that local and regional voluntary organisations in the social sector are excluded from the study. These organisations are often relatively small, with no or very few employees (cf. CFSA, 2018), and the administrative burden as a result of the financing of these organisations cannot, therefore, be adequately measured by examining the academic administrative staff development. Likewise, it is vital to know how Danish social organisations have a different, more project-based funding composition and are regulated more closely than cultural and sports organisations (Ibsen, 2020). As a result of these circumstances, the conclusions cannot be generalised to the entire voluntary sector without considering the necessary caveats.

The article has been outlined in the following manner: In section two, the existing research on financing voluntary organisations and different views on bureaucratisation, transaction costs and organisational capacity have been examined. This examination comprises the foundation for testing the hypothesis. In section three, the variables used and the method is outlined. In section four the results of the analyses have been presented. In section five, the results have been interpreted, and the perspectives for future research, which investigates the financing of voluntary organisations, have been discussed.

2. How Funding Affects the Number of Administrative Personnel in Voluntary Organisations

Two theoretical perspectives have significantly contributed to how we understand the relationship between financing and the administrative capacity of non-profit organisations – neo-institutional organisation analysis (DiMaggio & Powell, 1991; Meyer & Rowan, 1991) and neo-institutional economic theory, with the latter focusing on transaction costs (Coase, 1937; Williamson, 1985). Both perspectives belong to the concept of

neo-institutionalism but are based on different assumptions concerning how the actors think and have different levels of analysis. Nevertheless, they can contribute to a prosperous and pluralistic understanding of the investigated phenomena.

2.1 The Neo-Institutional Organisational Approach

The neo-institutional organisational analysis represents a macro perspective, focusing on the importance of organisational fields, sectors and norms in society. The assumption about how organisations strive for security and legitimacy is particularly significant for the problem highlighted in this article (DiMaggio & Powell, 1991). Herein, organisations are perceived as legitimate if they adopt the dominant structures and working methods used by other organisations in the field. This process creates homogeneity as the organisations increasingly resemble each other (DiMaggio & Powell, 1991, p. 65). The concept of isomorphism (individualisation), created through coercive, mimetic or normative mechanisms, is central to understanding the processes creating homogeneity.

Coercive isomorphism includes formal and informal pressures on organisations from the other organisations they depend on; the more significant the dependence, the more the organisations will adapt their structure, culture and behaviour (DiMaggio & Powell, 1991, p. 74). Some Danish studies have pointed out such trends, where voluntary organisations are forced to state prepared standards for reporting and documentation, charts of accounts and concepts for action descriptions (Espersen et al., 2018). Several foundations have also contributed to this development with high requirements for documentation and impact assessments. In addition, the fact that many grants are given temporarily and must be applied for again only a few years later increases the organisations. 'Academic competence as well as good relationships and active networking' are needed to meet the conditions (Espersen et al., 2018, p. 91) that contribute to increased employment of academic administrative personnel.

Mimetic isomorphism implies that less powerful organisations imitate larger, more powerful organisations to boost their status and legitimacy. DiMaggio and Powell (1991) write that this phenomenon occurs in sectors where the organisational goals are diffused or where there is uncertainty regarding the means-ends connection. In this context, all conditions often apply in social policy (Mulgan, 2015), as we often work with so-called 'wicked problems' – complex challenges without simple or logical solutions (Crowley, 2017). These conditions encourage some voluntary organisations to imitate organisations that outwardly seem more successful or appear more 'business-like' (Andersen, 2019; Milbourne & Murray, 2017).

The concept of *normative isomorphism* deals with how organisations imitate other organisations in their field due to social or cultural pressures. This form of isomorphism also includes the influences of professionalisation, including the general growth in managerial functions. Danish and Nordic studies have shown how civil society organisations increasingly orient themselves towards the business world, importing organisational models, mindsets and dynamics (Andersen, 2019; Wijkström, 2011).

In summary, the neo-institutional organisational analysis can contribute a macro-sociological perspective on the growth of academic staff in voluntary social organisations – a finding that, as shown above, is also supported by some concrete Danish studies (Andersen, 2019; Espersen et al., 2018). The importance of the funding must be understood here by referencing the interaction between the structure and culture of the voluntary social sector, with few and significant players in the form of the state and the dominant foundations, which pressure voluntary social organisations to increase the number of academic staff by leveraging their respective dominant roles. These trends contribute to a general increase in academics in voluntary social organisations.

2.2 Transaction Costs Analysis

Conversely, the limitation of the neo-institutional organisational analysis is that the link between financing and the development of academic staff is very general (and, in some cases, only indirect). However, this article aims to draw a more direct link between different financing instruments and administrative costs. Such a link can be established within the discipline of *transaction costs analysis*. Moreover, this perspective is within the new institutional economic theory framework, where asymmetric information and bounded rationality are assumed to affect agents' behaviour.

According to this perspective, created by Coase (1937) and developed by Williamson (1985), *transaction costs* are defined as costs associated with identifying potential business partners, conducting negotiations and drawing up and following up on a contract. The need for contract and control arises due to the assumption of the opportunism and limited rationality of the negotiating parties due to asymmetric information between investors and suppliers.

Trust between the negotiating parties also impacts how the parties assess the risk of opportunism (Vanneste, 2014). This research perspective was initially developed to analyse market transactions but has since included non-market conditions (Wang, 2007), including analyses of the financing of non-profit organisations and social investments (FitzGerald et al., 2019).

All of the involved parties incur transaction costs: 1) with public authorities and the distributing funds (the investors); 2) with the voluntary organisations (suppliers) – this applies to those who obtain a grant and those who have prepared applications that are eventually rejected; 3) with any cooperating organisations and 4) with mediators and intermediaries. However, as described in the introduction, this article exclusively focuses on transaction costs in voluntary organisations. Therefore, it is relevant to emphasise that the identified transaction costs only constitute a subset of the total costs.

Transaction costs will mainly be working time on the application, negotiations and follow-up (McKay, 2013). Both international (Pott, 2017; Warburton et al., 2018) and Danish studies (Espersen et al., 2018, p. 91) show that these functions require an academic skillset. However, transaction costs can also manifest as liquidity burdens and a lack of capacity utilisation, possibly due to long response times from investors (Wang, 2007).

2.3 An Example

Imagine an example of these kinds of transaction costs – a voluntary organisation seeks support from foundations to finance the aid it provides. The costs are linked to three phases with smooth transitions. The first phase is before the negotiation of possible financial support. Here, employee resources must be used to identify relevant funding sources, including uncovering award criteria and analysing where matches indicate the organisation's funding needs. A project description must then be prepared, including the involvement of the target group, preparation of change theories, KPIs, budget and any legal and IT-related clarifications. These expenses are incurred regardless of whether funding is obtained or not.

The second phase comprises the negotiation. Here, the scope includes the products prepared in Phase 1. However, the investor wants a very elaborate and detailed contract due to concerns about the supplier's potential opportunism and asymmetric information (FitzGerald et al., 2019). Specifically, the investor may be concerned about whether the grant is used for the agreed purpose or whether the social effects mentioned in the application are achieved. If the parties have a long-term, trust-based relationship, then the need for a detailed contract can be reduced.

The third phase is implementation and follow-up or shut-down after the end of the contract. This phase includes personnel costs for developing and implementing the agreed consulting products, ongoing costs for monitoring, impact calculations and reporting and any idle costs due to contractual inflexibility and restrictions. Finally, at the end of the contract period, costs for renewal or winding up the effort are generated.

Several international empirical studies have investigated the occurrence of transaction costs in different social efforts. For instance, in a dataset from the USA, Frumkin and Kim (2002) identified that a 1 per cent increase in public grants increased administrative costs by 2.1 per cent the following year. Furthermore, Pandey et al. (2018) found that the total transaction costs of social investment for youth recidivism reduction in Massachusetts amounted to 9 per cent of the total expenses, whereas Dudkin et al. (2005) detected a level of approximately 10 per cent of the total costs of establishing partnerships. Several studies also indicated how the administrative burden in obtaining and handling grants does not correlate with grant size – smaller grants can require the same resources as large ones, rendering the smaller grants relatively more expensive (ibid; Gronbjerg, 1993; Frumkin & Kim, 2002). In a general analysis of public tenders in Denmark (not only social tasks), Petersen and Bækkeskov (2015) also showed that the transaction costs of smaller projects are disproportionately higher, and 'first-generation tenders' have significantly higher transaction costs than later tenders.

Most of the literature above has focused on public funding for voluntary organisations. However, this article contributes to the literature by analysing the transaction costs of public and private revenue sources. This choice is appropriate for two reasons. First, over half of the organisation's revenue is derived from private sources (Clausen, 2021). Second, research indicates that private sources of revenue, including social investments, will play an increasingly important role in financing voluntary social organisations in the future (Salway, 2017).

2.4 The Hypothesis

The literature review above reveals how high transaction costs can be expected to be associated with projects due to specific requirements for applications, negotiations and subsequent monitoring and reporting. Furthermore, these costs are further increased due to the temporary duration of the projects, which necessitates the frequent repetition of the application-and-negotiation game. Therefore, based on this reading of the literature, the

following hypothesis can be formulated:

Funding earmarked for specific projects will entail higher administrative costs in the form of administrative FTEs than non-earmarked funding.

This hypothesis will be analysed in relation to whether the funding is derived from private or public sources and whether the receiving organisation is large or small.

See section 3.1 for the definition of the variables in the hypothesis.

2.5 Earmarked Project Grants as an Option

Before analysing the data, it is essential to acknowledge that the literature review above comprises a selection of studies that broadly focus on the negative consequences of the new and increasingly earmarked social financing. However, not all studies have concluded that earmarked project funding is an overall negative. On the contrary, several studies have drawn attention to positive effects on both the organisational and societal levels.

Noticeably, FitzGerald et al. (2019) indicated that one can never expect transaction costs to be zero and that even protracted negotiations can potentially bring benefits in the form of better project descriptions, better relationships between the parties and improved organisational capacity, which can strengthen the organisation. Ultimately, transaction costs must be weighed against potential improvements. Further to these arguments, Gronbjerg (1993) explicitly highlighted how project financing has allowed voluntary organisations to maintain, expand and diversify their aid programs beyond what would have been possible with traditional fundraising: 'The overall advantages outweigh the disadvantages or are at least more obvious and certain than for alternative funding sources' (Gronbjerg, 1993, p. 260).

Salamon (1987) argued that the transaction costs associated with the government delivery of welfare programs are far higher than when voluntary initiatives are mobilised, rendering them suitable as the primary providers of welfare programs. Conversely, several voluntary failures indicate the appropriateness of voluntary organisation deliveries can be questioned. It is impossible to comprehensively present these voluntary failures in this article. However, one has particular relevance for the criticism of the voluntary organisations, namely 'amateurism in the aid efforts themselves', which may imply a lack of knowledge about the target group, professionalism in aid efforts and a lack of systematics, resulting in uneven help. According to Salamon (ibid.), these errors can largely be countered by involvement (particularly governmental involvement) in the financing and quality assurance fields. His 'lever' is state funding, but several private foundations have similar objectives to increase the organisational capacity and the quality of the efforts in the organisations they support. Therefore, the earmarked project funding and the potentially derived operational improvements can be traced to state and private sources.

As shown above, earmarked project funding often goes hand in hand with professionalisation and bureaucratisation. According to Kramer (1994), however, voluntary organisations should not be concerned that this development will undermine organisations' independence and voluntary ethos. On the contrary, voluntary organisations are often characterised by an insufficient (rather than an excessive) bureaucracy. This is mainly claimed to apply to the small organisations that, according to Kramer, are not infrequently characterised by amateurism and inefficiency. The pertinent question of whether professionalisation leads to bureaucratic inertia or flexibility is ultimately subject to managerial choices and actions and cannot be determined in advance. Equally significant is Kramer's (1990) empirical demonstration that the expansion of the bureaucratic capacity of voluntary organisations primarily occurs in line with the age of the organisation – and only to a lesser extent as a result of financial conditions. His empirical study, therefore, supports the neo-institutional thesis concerning sector-level isomorphic trends, contributing to the general increase in the number of administrative employees.

In summary, the research literature indicates that increased and inappropriate transaction costs are caused by project financing. Furthermore, the literature highlights that these expenses contribute to important capacity building in voluntary organisations and strengthen the foundation for better quality in the aid efforts and opportunities to scale up efforts and help more people.

The subsequent section discusses the empirical test of the hypothesis regarding the connection between different revenue types and administrative costs, considering the employment of academic staff.

3. Data and Methods

This article derived data from a longitudinal dataset for 2012–17 with the accounts for revenue in national voluntary social organisations and register data from Statistics Denmark on the education and working hours of employees in the same organisations. The organisations were identified based on the National Board of Social Services (NBSS) review of nationwide social organisations. In 2017, the total population was 98 organisations,

90 of which provided accounts, corresponding to 92 per cent of the population. The revenues of the non-participating organisations were identified from the NBSS review, and there is not considered to be a systematic connection between organisations that do not publish their accounts and the study's dependent variable.

Four revenue coding categories (see Table 1) were detected based on the accounting information. Information on equity and the organisation's age was taken from the accounts (alternatively, the Business Registry at the Danish Business Authority). Only the revenue used in Denmark was included (thus, activities in third-world countries were excluded from the analysis). The data set is predominantly balanced. On average, accounting data is present in 5.3 cases out of six possible observations per organisation in the six-year analysis period. This omission can be attributed to the fact that some organisations have been unable to obtain accounting data for all years, and some organisations first entered the register during the analysed period. The information about the organisations' employees and their annual working hours was obtained by collating the accounting information with the Education and Employment Register (UDDA and IDAN) under the auspices of Statistics Denmark – the central authority on Danish statistics. In Denmark, this information can be used for research in anonymised form, providing a unique opportunity to examine correlations between funding and the development of certain types of trained employees and their annual working hours.

3.1 Variables Used

The dependent variable in the model is hours accounted as FTE from salaried employees with academic education in administration or social science etc. These salaried employees can have an MSc degree in political science or business administration in Denmark; however, an employee with a degree in medicine or psychology will not be included. The specific degrees included in the variable can be seen in Appendix A. Obviously, it is not possible to determine their exact job function based on an employee's educational background. Moreover, the definition does not capture cases in which transaction costs in the form of working hours are carried out by, for example, a psychologist preparing an application or a social worker drafting documents for a status report. However, two arguments defend the variable used. First, it is a strength that a uniform criterion is used across organisations and throughout the entire period, which keeps the sources of error constant. Second (and more pragmatically), the chosen variable is preferable to information on the organisations' administrative costs (for example, the administrative ratio), as they are determined in the accounting practices of each organisation, and no standard definition of administrative costs in the accounting regulation of the sector. In addition to the definitional challenge, it is a real problem that many organisations do not disclose administrative costs in their accounts. Overall, the chosen dependent variable can, therefore, be regarded as a minimalist but constant indicator of the administrative costs in the studied organisations - an approach that matches the focus in the literature on the increase in the number of academic staff.

In the article, four independent variables pertaining to revenue are included in the model, all of which are calculated in Danish Kroner (DKK) and converted to US dollars. The fifth variable is equity, and the sixth is organisation age (in years). The first two financial variables are 'non-earmarked funding' (that is, non-earmarked revenue, such as donations or land grants) from (1) private sources and (2) public sources. The criterion for revenue included in this category is that the recipient organisation can decide how to spend this revenue, albeit within their mission statement, and that no specific benefits are expected. Examples include a general basic subsidy under the Finance Act (Budget) or a monthly donation from a private citizen. The following two variables are 'project funds' (earmarked revenue, such as project grants, contracts etc.), for which concrete counter-services (for example, specific consultancy services) must be delivered. This category can also be divided into two variables, depending on whether they come from (3) a private source or (4) a public source (see Table 1 for definitions and examples).

Two other internal variables are included in the model. In part, the equity capital of the organisations (5), which is used as a proxy for consolidated organisational stability, is included in the model because previous studies of voluntary organisations have highlighted the importance of internal stability for earning power (Chapman, 2018; Enjolras & Strømnes, 2018). In part, the age of the organisations (6) is included in the model to verify Kramer's (1990) assumption that bureaucratisation increases with the age of the organisation. In principle, it would also be desirable to have an external variable in the model to measure the funding supply based on the consideration that, in a year with limited supply, it might be more important to have a professional fundraising effort than in a year with considerable revenue available. State funding, in particular, has historically been the subject of significant fluctuations in the supply of support (Ministry of Finance, 2015). However, an overview of the supply of possible financing (including both public and private sources) does not exist for the examined period.

Table 1. Definition of sources of revenue with examples

	Revenue from private sources	Revenue from public sources		
	Definition: Revenue from private citizens, companies, foundations etc.	Definition: Revenue from the state, region or municipalities		
Non-earmarked revenue Definition: Income that the organisation itself determines the use of within its mission statements	(1) Donation from a private citizen to an organisation, for example, a monthly grant to YWCA Social Work	(2) Operating grants under the Finance Act, where the receiving organisation can use the funds within their mission statement		
Targeted revenue Definition: Revenue tied to a specific purpose defined by the donor	(3) Grant from a foundation for developing an effort (for example, education for vulnerable young people). Social impact investments also belong in this category.	(4) Project grant for developing a specific effort in an organisation (for example, improved help for children exposed to violence)		

Source: National Council for Voluntary Organizations (NCVO) and the National Board of Social Services.

As mentioned at the outset, it is essential to be aware that the dependent variable only covers a subset of the organisation's transaction costs and that transaction costs with other actors also occur. When reading the results, it is, therefore, not the dollar level that is significant but rather the relative differences in administrative academic FTEs associated with the different sources of revenue. These are expressed using calculated regression coefficients (see Table 2).

4. Results and Analysis

Longitudinal data provides a better opportunity to investigate causal relationships than cross-sectional studies. However, simultaneously, it implies that a regression model must be chosen that can handle the internal dependence of organisation's year-by-year development. Against this background, the decision has been made to use a fixed-effect model (Beck, 2001; Woolridge, 2016), whereby corrections are made for unobserved effects. For example, in an organisation with many academically educated administrative staff in Year 1, there will usually be a high correlation with many such administrative staff in Year 2. Simulations illustrate the chosen model's robustness with robust and panel-corrected standard errors (cf. Beck & Katz, 1995). In both cases, the coefficients are stable.

The results of the regression model have been presented in Table 2. Appendix B shows descriptive statistics for the data set, including average values, standard deviation and the correlation between the variables. However, when assessing the descriptive statistics for the investigated organisations, it is essential to be aware of the widespread revenue levels among the investigated organisations.

Generally, the analysis aims to better understand the relationship between different types of funding and administrative costs in voluntary social organisations. Specifically, the purpose is to test the established hypothesis that funding linked to earmarked projects will result in higher administrative costs in more administrative academic FTEs than non-earmarked funding.

The result of the overall model has been presented in the first column of Table 2. In the two following columns, the overall model has been divided, and calculations have been performed for the smallest organisations, which, in 2017, had a total annual revenue equal to or below the median of \$1.2 million, as well as for the largest organisations, which had annual revenue above the median. This distinction investigates whether any underlying patterns, which do not emerge in the overall model, can be observed. The overall model achieves an R2 of a reasonable 0.57, whereas the two sub-models are at a modest 0.14 and 0.25. The low levels of explanation in the models for the large and small organisations can be attributed to n being halved, which also entails that the coefficients in these analyses are generally statistically significant at a lower level, and individual coefficients are insignificant. Sensitivity analyses of the significance of the two internal variables have also been conducted. They show that R2 modestly increases to 0.60 and 0.66 when equity and age are omitted, whereas the coefficients in the model are stable.

	All organisations	Smallest organisations	Largest organisations		
Private non-earmarked funding	0.021****	0.050^{**}	0.020***		
Public non-earmarked funding	0.004^{*}	0.070^{***}	0.003		
Private project funding	0.047^{**}	0.049^{*}	0.050^{*}		
Public project funding	0.015^{***}	0.033	0.010^{**}		
Equity	0.033****	0.040	0.032***		
Age of organisation	0.060^{***}	-0.006	0.255***		
Constant	2.728^{***}	0.712***	0.550		
Obs	477	239	238		
\mathbf{R}^2	0.57	0.14	0.25		

Table 2. Correlation between revenue types and administrative FTEs with academic backgrounds in nationwide voluntary, social organisations from 2012 to 2017

Note. Regression analysis with fixed effects. Dependent variable: Number of hours for administrative staff (with academic background) measured in FTE. Independent variable: Sources of revenue in DKK million. The statistical significance level is as follows: * p < 0.05; ** p < 0.01; *** p < 0.001.

In the model showcased in Table 2, the coefficient is 0.021 for private non-earmarked funding and statistically significant at a 0.001 level. Therefore, the coefficient should be interpreted such that an increase of \$158,000 in private non-earmarked funding positively correlates with an increase of 0.021 administrative FTE, corresponding to a 2.1 per cent increase.

The disaggregated analysis in columns 2 and 3 adds important nuance to the overall model. Column 2 shows how the smallest organisations experience a 0.05 FTE increase. On the other hand, there is only a correlation of 0.02 FTE in the largest organisations, corresponding to 5 and 2 per cent. This finding can be interpreted as evidence that large organisations benefit from the economy of scale of their larger secretariats and possibly that they are better known and can more efficiently obtain pledges of support from private sources. On the other hand, smaller organisations must recognise that being poor is expensive, considering the costs of making money.

Non-earmarked public funding is the source of revenue in the overall model with the least impact on administrative costs. Therefore, column 1 shows how the significant coefficient is a modest 0.004, corresponding to an increase in administrative FTEs of 0.4 per cent due to \$158,000 more in this revenue category. However, this variable generates very different images for large and small organisations. In the small organisations, a strong and significant coefficient of 0.07 is seen, corresponding to 7 per cent increased costs due to \$158,000 more earned, whereas in the largest organisations, a non-significant coefficient of only 0.003 is seen, corresponding to a modest 0.3 per cent. This is a significant difference, pointing to economies of scale in large organisations. An alternative interpretation could be that the smaller organisations use the non-earmarked funding to a greater extent to upgrade the organisational capacity in the form of academic staff to develop the organisational ability, possibly including better help for the target groups.

For private earmarked project funds, the overall model shows a coefficient of 0.047 and a statistical significance of 0.01, corresponding to just under 5 per cent. This picture is replicated for small and large organisations, with coefficients of .049 and 0.050, respectively – statistically significant at the 0.05 level. In practice, this revenue category mainly consists of earmarked project grants from private funds, such as specially developed projects of an innovative nature with high ongoing monitoring and follow-up requirements. This type of revenue has the absolute highest coefficient among all sources of revenue in the general model and is, therefore, where the highest transaction costs are found. One possible interpretation of this result could be that the private foundations that account for most of the revenue in this variable extend 'tailored' grants with specific requirements for the organisations, which are costly to develop and implement.

Public earmarked project funds, including state pools and municipal project grants, have a coefficient of 0.015 in the general model, which is statistically significant at a 0.001 level. This equates to an additional \$158,000, triggering a 1.5 per cent increase in administrative costs. Here, too, the coefficients are highest for the organisations in the poorest part of the population, where the coefficient is 0.033 (but not statistically significant), whereas, in the wealthiest organisations, it is a modest 0.010 and significant at a 0.01 level. The impact of public project funding on administrative costs has been the subject of most studies examining the extent of transaction costs at the organisational level. Therefore, this analysis finds that the impact of this approach is smaller than from the private earmarked project funding and non-earmarked private funding. One possible explanation could be that several administrative burdens are associated with obtaining public project funds. However, the

distribution of large-scale financial support means that the authorities aim for a certain efficiency and standardisation of the requirements for the organisations. Added to this is the importance of continuous political attention to reducing the administrative burden.

A significant correlation can be found between organisation equity and the extent of academic administrative staff in the general model, with a coefficient of 0.033. The smallest organisations have no significant coefficient, whereas the coefficients of the largest are at par with the general model. Therefore, equity is included in the model as a proxy for consolidated organisational stability, and the theoretical expectation will be as found, namely, a positive correlation. The coefficient for organisation age is 0.060 and is statistically significant at the 0.001 level. This implies that the model predicts academic FTEs will increase by 6 per cent yearly (slightly more than the observed 5 per cent, cf. Section 1). No significant correlation can be demonstrated here for the smallest organisations, whereas the largest has a positive and significant coefficient of 0.255. The positive correlation between equity and the age of the organisations in relation to the extent of academic labour indicates that the development has not only been driven exogenously through funding but also that the expansion of the bureaucratic capacity of the voluntary organisations largely occurs in alignment with the age of the organisations.

5. Conclusion

This article focuses on the administrative costs associated with different funding sources in voluntary social organisations. However, as mentioned in the literature review, several derivative effects are linked to this perspective, including whether an 'academisation' of the voluntary organisations changes their ethos from voluntary grassroots to a professional bureaucracy and how this affects the quality of their aid work. Likewise, the literature review revealed conflicting perspectives on how bureaucracy and administrative academic staff growth should be understood and interpreted. In conclusion, I, therefore, aim to avoid being too categorical when reading the analysis results, remaining open to different interpretations depending on the perspective.

The main result of the article is the demonstration of the correlation between different types of revenue sources and the extent of transaction costs in the form of administrative academic FTEs. In particular, high costs were associated with earmarked, privately financed projects, mainly financed by foundations. This is remarkable in light of how this financing form is expected to grow in the coming years (Salway, 2017). The second highest is transaction costs for obtaining non-earmarked funding from private individuals, whereas the publicly funded projects are slightly lower. These three revenue types share their temporary nature in common, which is a cost driver due to the need to find private contributors and renew applications, negotiations and ongoing monitoring and reporting of projects. Conversely, non-earmarked public sector funding is the most cost-effective method of financing voluntary social organisations. In Denmark, these independent sources of revenue are, for example, fixed basic grants with modest and standardised follow-up procedures.

The second main result of the article is the uncovering of the different cost levels of the organisations, depending on whether they are small or large (in terms of revenue). Here, the analytical models for the small and large organisations had a lower degree of explanation than the general model, and several coefficients were statistically insignificant (thus, the results must be read cautiously). However, the analyses showcased a finding – which has also been established in qualitative Danish studies (Espersen et al., 2018) – larger organisations have significant economies of scale in revenue generation. On the other hand, publicly funded projects are the most cost-effective form of financing for smaller organisations. This may be attributed to the fact that the application procedures issued by Danish public authorities are generally more standardised than foundation-financed projects and, in turn, less demanding with respect to the content of the applications and project negotiations.

However, the article's findings also support an alternative interpretation of the reasons behind the increased academic workforce in voluntary social organisations. Hence, it has been established that there is a positive correlation between organisation age and the extent of academic labour, which international studies have also identified (Kramer, 1994). The growing bureaucracy also seems to have its dynamics separate from funding. Support for this result can be found in the neo-institutional organisation theory and the identification of isomorphic tendencies, which, as described in the literature review, can necessitate more academic staff as a result of increased requirements for documentation and so on or create the same effect as a result of imitation or norm pressure. Qualitative studies have established such mechanisms (Andersen, 2019; Milbourne & Murray, 2017).

A general reading of the literature also implies an openness to an alternative interpretation of the above results, namely that the growth in academic FTEs can be perceived more in building organisational capacity than an administrative cost. From Salamon's (1987) perspective, state funding corrects potential voluntary failures in

voluntary organisations, such as amateurism, which can create ineffective aid. From this point of view, one can argue that earmarked project funding and the consequent growth in academic staff are particularly beneficial for smaller organisations, as they gain an organisational capacity that can improve the quality of aid efforts.

In conclusion, some research perspectives are linked to the analysis in this article. First, the data used is limited to national voluntary social organisations, which supplement public welfare institutions and help many people on the fringes of society. However, they form only one segment of the many types of voluntary associations in many sectors. Therefore, it would be preferable to prepare analyses that reveal financing conditions for the entire voluntary sector, including smaller organisations without administrative personnel. Second, concerning this article's hypothesis about the connection between project-financed sources of revenue and the development of administrative academic FTEs, the method used here provides a more precise connection than previous analyses, which were based on the respondents' self-reported data on administrative costs. However, ideally, the hypothesis would be best elucidated with the help of more precise data regarding the employees' actual work tasks and data about the effects of the organisations' aid efforts. This issue should be addressed in future research.

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Appendix A. Applied education categories for administrative academic staff, including DISCED-15 code

3510: Social sciences, without further specification
3515: Social economy
3520: Political science
3525: Political science
3535: Anthropology and cultural analysis
3540: Sociology
3545: Social sciences and interdisciplinary programs
3550: Journalism and communication
3555: Library, cultural administration, and archive
4010: Business economics and administration, without further specification
4015: Accounting, auditing and taxation
4020: Finance, banking and insurance
4025: Public and private administration and management
4030: Marketing
4035: Office and administrative assistance
4040: Wholesale and retail trade

4090: Business economics and interdisciplinary programs

Appendix B. Descriptive statistics and correlation matrix

		a. 1. 1		-	2		-		-
	Ave.	Std. dev.	1	2	3	4	5	6	1
1 Academic FTEs	5,4	15,7	1,00						
2 Private non-earmarked funding	96,8	235,5	0,88	1,00					
3 Public non-earmarked funding	17,9	69,1	0,23	0,28	1,00				
4 Private project funding	1,3	4,9	0,25	0,16	0,00	1,00			
5 Public projects	15,4	73,6	0,65	0,54	-0,12	0,05	1,00		
6 Equity	21,3	66,0	0,60	0,55	0,19	-0,02	0,59	1,00	
7 Organisation age	27,5	20,4	0,20	0,20	0,15	0,15	0,25	0,42	1,00

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