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All linkages are equal, but some linkages are more equal than others

Does the number of institutional linkages predict fundraising among aid organisations in Sweden?

Master's Thesis 15 credits
Department of Business Studies
Uppsala University
Spring Semester of 2016
Date of Submission: 2016-06-02

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Abstract

Several theorists have argued that organisations can increase performance through formalised cooperation with other important organisations (Baum & Oliver 1991). This notion of “institutional linkages” is appealing as it uses linkages as a proxy for legitimacy awarded to organisations for adherence to exogenous expectations. However, this operationalization also has its limitations. For what is the role of institutional linkages in groups of organisations where a majority of them – or all – are linked? Baum & Oliver (1991) provide meagre advice for what is to expect beyond the point of organisations being legitimate (linked) or not. But if organisations that hold (at least) one institutional linkage perform better than unlinked organisations, should not organisations that have multiple linkages also perform better than those who have but a single one? Intuitively, this seems reasonable. But considering that institutional linkages are associated with costs in terms of additional administration, audit and fees, it is not obvious that organisations desire ‘as many linkages as possible’. Using data for 339 aid organisations in Sweden, this study suggests developing the theoretical concept of institutional linkages, arguing that the number of institutional linkages serves as a prediction of organisational performance. Although further inquiry is needed to determine whether this effect persists as the number of linkages continues to increase, the findings suggest that organisations will strive towards having more institutional linkages than competing organisations.

Keywords

Institutional linkages, institutional theory, aid organisations, fundraising.

Preface

Quantitative studies within social science go beyond numbers. To not lose sight of the individuals who helped make this thesis possible, sincere gratitude is hereby directed towards those who participated in the series of background interviews conducted early in the process. The interviews helped me grasp the institutional context of aid organisations in Sweden and led to the identification of the relevant institutional linkages. The respondents and their organisations were also helpful in providing information that contributed to the data collection (e.g. lists of member organisations, given grants etc.).

Thank you,

Tommy Jonsson, Controller at The Swedish Fundraising Council

Joacim Carlson, Programme Manager at Sida

Per Byman, Executive Director at The Radiohjälpen Foundation

Emma Bergling, Press Advisor at The Swedish Postcode Lottery

A thank you is also directed towards the staff at The Swedish Tax Authority, who put up with all my questions on tax-deductions. A special thanks also to *Professor Stefan Jonsson* and *Ph.D. Noomi Weinryb* for guidance and inspiring conversations throughout the masters program in social analysis. So also to *Jimmy Zöger*, *Magnus Gidlund* and *Jonas Söderlind*, friends who provided crucial clues to navigating the jungle of statistical analysis.

Gabriel Ehrling

Introduction

If a person wakes up one day and feels a need to contribute in the effort for better cancer treatment (and does at that point not hold an M.D.) he or she might start looking for an aid organisation to support. What this person probably does not know, is that there are, at the time of writing, 418 aid organisations in Sweden (The Swedish Fundraising Control 2015a), no less than 35 of which in their names declare that their work concerns cancer. That is only counting those found under the “90-account” industrial standard for aid organisations, which regulates organised fundraising, advertisement and aid-work in Sweden. So, how does this person decide which aid organisation to support?

For the individual aid organisations, the abundant number of alternatives has a very direct implication: competition. All 35 aid organisations fighting cancer does of course want to be picked as recipients. Therefore, they will want to look as “good” as possible. But how does this help our giver? Since he or she cannot touch and feel, weigh or squeeze, aid-work the way one would with an avocado at the supermarket, it is reasonable to assume that generalised ideas about the organisation – what some researchers call “legitimacy” – is important. If so, whether or not an organisation is recognised as “legitimate” will guide benevolence. This perception of “legitimacy” will in turn result from what is presented as being “legitimate” within the wider organisational field, here fundraising and aid-work. Thus, this notion is expected to influence organisational performance in terms of fundraising.

A straightforward operationalization of how organisations develop, wield and showcase legitimacy is found in Baum & Oliver (1991; 1992; 1996). They introduce the theoretical and empirical notion of *institutional linkages* by proposing that organisations – in their empirical case: nurseries and day-care centres in Toronto, Canada – can increase performance by *linking* to important institutions. Thus, the legitimacy held by the *linkage-providing* organisation will – via institutional linkages – give *linkage-holding* organisations a competitive advantage and guide parents in their choice of the most “legitimate” nursery or day-care centre.

Baum & Oliver (1991) identifies two types of institutional linkages; to branches of state and local government, formed when the public agrees to purchase certain services from the organisation, and to other non-governmental community institutions, created when e.g. agreeing to share facilities. But since their notion of legitimacy is operationalized as being either existing or not (and not scalable), they do not explore the legitimising role of institutional linkages beyond the initial threshold of a single linkage.

It is not surprising that parents choosing between competing nurseries or day-care centres prefer holders of institutional linkage to those without. But how do parents choose between alternatives that all hold institutional linkage?

In the empirical case of aid organisations found under the 90-account industrial standard, no less than nine different *linkage-providing* institutions were identified and a majority of studied aid organisations held at least one. So although narrowing the choice set somewhat when using institutional linkages as a proxy for legitimacy, the person wanting to contribute to the fight against cancer still has about 20 aid organisations to choose between – all equivalent in terms of institutional linkages as under the operationalization in Baum & Oliver (1991).

To explore the merit of institutional linkages as an proxy for legitimacy and in extension organisational performance, beyond Baum & Oliver (1991; 1992; 1996), this study investigates whether or not legitimacy derived through linkages can be viewed as a “ladder” (instead of a mere “threshold”), where it is predicted that organisations holding more linkages are also more successful in fundraising. Thus, can it be expected that our charitable person will favour an aid organisation holding multiple linkages over those holding but a single one?

An additional factor is that with linkages follow not only legitimacy but also bureaucratic procedures (of varying character, depending on the institution at hand). Some institutional linkages included in this study are to public authorities, such as Sida, The Swedish International Development Cooperation, while others are to large NGOs, such as The Swedish Postcode Lottery. Some imply direct access to funds, others give aid organisations a say in organised advocacy work, and yet others provide resources for organisational development and leadership training. So by linking up to important institutions, aid organisations submit themselves to additional resource-demanding audit/control and fees for administration or membership.

Organisations are thus faced with a trade-off: Linkage provides opportunity of some sort or secures certain income, but also induces costs. So does aid organisations really view linkages in terms of “the more the merrier”?

Research question

Does the number of institutional linkages predict fundraising among aid organisations in Sweden?

Before answering the research question it is necessary to in-depth consider the theoretical and empirical notion of institutional linkages on which this study builds. To provide readers with information on the institutional context, the literature review is followed by a short description of the empirical setting facing aid organisations found under the 90-account industrial standard.

Literature Review

The assumption that institutional linkages might help donors decide which aid organisations to make contributions to – consequently affecting the overall fundraising of aid organisations – is well anchored in previous research. But more information is needed on institutional linkages as such and on what theory and previous research suggests in terms of empirical operationalization and research layout.

The profound role of institutional linkages in determining organisational performance as suggested by Baum & Oliver (1991) implies that the presence of institutional linkages in highly institutionalised sectors – such where overall institutional organisational fields (DiMaggio & Powell 1983) are particularly important for understanding organisational performance – could fundamentally change the selection process and make institutional linkages more important than competition in a technical sense (e.g. competition via price and quality of products/services). This is a far-reaching claim, but there are other accounts indicating that linkages, understood more abstractly as different types of connections to institutions with influence over resource distribution mechanisms (Aldrich & Pfeffer 1976; Pfeffer & Salancik 1978), can offset technical competition, and thus change the rules of the game for organisations.

In a study of United Way, a large US non-profit organisation, Provan et al. (1980: 222) concludes that “linkages with environmental elements can modify power relations within an organizational set built around resource-dependence relations.” In two studies on funding of university departments, Salancik & Pfeffer (1974) and Lodahl & Gordon (1973), describe how linkages that are supposedly independent of resource acquisition still bring significant advantages in relation to competing departments. In yet another study of linkages from a resource dependence view, Boyd (1990), finds that firms use linkages to respond to environmental uncertainty. Galaskiewicz (1997) finds a similar pattern when studying charity organisations in Minneapolis, US. Hence, there is wide indications of that linkages are indeed potentially important in explaining organisational performance.

More concretely, Baum & Oliver (1991: 187) defines institutional linkages as: “a direct and regularised relationship between an organisation and an institution in the organisation’s environment”. Their definition of institutions rests on Turk (1973) and Zucker (1987) and is phrased as: “government or community constituents in the organisation’s task environment that possess either communitywide and uncontested social acceptance (e.g., public schools, churches) or legislative and administrative authority in the organisation’s domain (e.g., government agencies, regulatory commissions)” (Baum & Oliver 1991: 187). According to these definitions, linkages require active measures from two independent organisations, implying that institutions are *formal* and not informal (e.g. norms) (cf. North 1990).

Baum & Oliver (1991) proposes that the impact of individual institutional linkages will depend on the institutional environment, that is, the general set of expectations and perceptions that are hard to avoid for the particular group of organisations (Meyer & Rowan 1977; DiMaggio & Powell 1983). The impact of linkages will also depend on the characteristics of organisations that achieve linkage and also on how legitimate the linkages themselves are among the studied group of organisations and in the environment as a whole (Baum & Oliver 1991). In a follow-up study on the differences between non-profit and for-profit organisations in terms of influences from institutional linkages, Baum & Oliver (1996: 1421) concludes that: “not only do non-profit and for-profit organisations behave differently,

but the bases for their competitive effects differ – external social legitimacy characterises non-profits, but intrinsic competitiveness characterises for-profits”.

Taken together, Baum & Oliver (1991; 1992; 1996) suggests that linkages can play a crucial role in determining what is “legitimate” within an organisational field, such as that of fundraising and aid-work. If this holds true in the case at hand here, managers of aid organisations can be expected to adapt their organisational structures to adhere to demands associated with linkages and *linkage-providing* organisations (Meyer & Rowan 1977).

On a critical note, Baum & Oliver’s (1991; 1992; 1996) use of methods from Population Ecology (see Hannan & Freeman 1977, 1984; Baum & Amburgey 2002) – specifically the use of organisational mortality as the key metric – implies that they cannot isolate funds acquired through institutional linkages. They are therefore not able to say with certainty whether the greater survival of linked organisations is indeed an institutional effect, or if it is just the case that organisations avoid closure and bankruptcy due to them attaining additional resources (this is also properly acknowledged by Baum & Oliver).

By setting the scope at the mere survival of organisations, Baum & Oliver (1991; 1992; 1996) also forsakes potentially important information residing in the relative performance of surviving organisations. Intuitively, this might be particularly problematic in the case of non-profit organisations, which for ideological and altruistic reasons might continue activities at performance levels where for-profit organisations would go out of business (cf. Varian 2014).

In order to answer the research question and determine the merit of institutional linkages as a predictor of organisational performance beyond the initial threshold of Baum & Oliver (1991; 1992; 1996), it is necessary to adapt Baum & Oliver’s (1991; 1992; 1996) theoretical and empirical concept accordingly. It is therefore noted that others have been successful in applying developed concepts of institutional linkages, thus further exploring their legitimising role.

Haveman (1993) operationalizes ‘mimetic isomorphism’, the theoretical notion of homogeneity among organisations arising from managers trying to make their organisations resemble each other (DiMaggio & Powell 1983), as entry and exit from different markets. Doing so, Haveman (1993) shows empirically how financial thrifts follow well-performing competitors into new markets through diversification.

Ruef & Scott (1998) develops Baum & Oliver’s (1991) theory by introducing a new conceptualisation of the legitimacy derived through institutional linkages. In a group of hospitals in the US, they find that some linkages will imply *technical legitimacy* (vouching for professionalism of doctors and surgeons), whilst others result in *managerial legitimacy* (assuring reliability of the hospital organisation). These two types of legitimacy are then related to an overall institutional regime, thus explaining why certain hospitals perform better under one regime and less so as the overall logic change.

So although not having rendered that many sequential studies, it appears that Baum & Oliver’s (1991; 1992; 1996) concept of institutional linkages serves well under several empirical operationalizations.

In conclusion, it is well documented that organisations can gain performance-enhancing legitimacy by linking to important an institution. But is it necessarily better to be linked to several? It seems likely, but each new linkage does also imply additional costs. It is also reasonable to expect that the legitimacy derived through linkages face diminishing returns to scale, implying that the first linkage is most important (cf. Varian 2014).

If it is better to hold multiple linkages than to hold one, it suggests that legitimacy is not only existing or not, as in the operationalization of Baum & Oliver (1991; 1992; 1996), but rather a “ladder” or a scale. Donors must then be able to rank organisations as more or less legitimate, using institutional linkages as a proxy. But if there is no extra gain to be derived from additional linkages, there is no need for organisations to care beyond the point where they pass the threshold of being institutionally linked. Thus, competition will take place elsewhere and there is no merit in expanding Baum & Oliver’s (1991) notion of institutional linkages.

Empirical setting

Aid organisations, and the aid-work performed within them, is a vital part of Swedish society since the 19th century (SOU 2003). Even after half a century with the “cradle-to-grave” Swedish welfare state (Lindbeck 1997), there is still need for charity and philanthropy. With wars raging in Syria, Iraq and Afghanistan – and the number of asylum seekers in Sweden reaching levels not seen since World War II (DN 2015) – perhaps so now more than in previous decades? Swedes are at least giving more than they used to. In the period 2003-2014, the aid organisations found under the 90-account standard increased their fundraising from private donors with 38 per cent, to an annual level of 5.8 billion SEK (Vamstad 2015).

All aid organisations included in this study are monitored under the thoroughly enforced 90-account industrial standard. The standard is managed by The Swedish Fundraising Control, a NGO controlled by LO, The Swedish Trade Union Confederation, Svenskt Näringsliv, The Confederation of Swedish Enterprise, Saco, The Swedish Confederation of Professional Associations and TCO, The Swedish Confederation of Professional Employees (the founding circle also included FAR, Föreningen Auktoriserade Revisorer). The Swedish Fundraising Control enforces an annual audit, caps expenses for fundraising efforts and administration and imposes sanctions on organisations that do not use raised funds according to their stated purpose. This regime has been in place since 1943 and to be included each aid organisations annually pays an administration fee of SEK 10 000-65 000 based on their revenues (Swedish Fundraising Control 2015a). Some of these aid organisations are hundred-year old social movements; others are highly professionalised branches of world-spanning international organisations such as Oxfam or UNHCR, United Nations High Commissioner for Refugees.

When subjecting themselves to the 90-account standard, aid organisations agree to publicly declare affiliation to The Swedish Fundraising Control in all marketing (Swedish Fundraising Control 2015b) and the stated purpose of the industrial standard is to assert potential donors of the reliability of actors in the market (cf. Akerlof 1970).

Considering the trust-demanding nature of fundraising and aid-work, where aid organisations ask donors for money with few or no legal strings attached, it can be assumed that it is in the interest of all stakeholders to keep the legitimacy associated with the 90-account standard high. The same is expected for the *linkage-providing* organisations included in this study. Background interviews conducted for this study also revealed a general increase in demands directed towards aid organisations in Sweden.

To understand the relevance of institutional linkages in the context of aid organisations in Sweden, it is recognised that non-profits in general, and aid organisations in particular, are politically enshrined. Non-profits do generally not pay income/corporation tax and do not have to impose VAT (SFS 2016b; SFS 2016a). There is no law regulating the internal activities of non-profits and only non-profits are exclusively, alongside the state, allowed to conduct lotteries (SFS 2016c). Many public authorities, such as Sida has formalised structures (institutional linkages), which license non-profits to wield public funds that are not accessible to organisations holding other legal statuses (Sida 2011). Also in the Swedish private sector, it is common to cooperate with non-profits (SvD 2015).

Aid organisations seem deeply rooted in institutions in the Swedish society, and so even as Sweden moves into a post-corporativistic era. It is therefore not surprising that institutional linkages to aid organisation in Sweden often reflect political ambition found in the *linkage-providing* organisation. In a context of increasing pressure on the welfare state (Swedish Government 2013), aid organisations are often depicted as an answer to the politicians prayers: As an ageing population demands more resources in terms of welfare, aid organisations could fill some of the gaps. It was, to take an example from this study, the desire to see “the solidarity expressed through the public welfare systems /.../ complemented with a society that to a larger extent is characterised by charity, responsibility and idealism” (Allians för Sverige 2006: 2) that motivated the introduction of a tax-deduction for gifts to aid organisations in 2012 (Swedish Government 2011). Tax-deductions for gifts to aid organisations were removed again in 2016 after a change in government, but remain on the political agenda.

However, ambitions with bearing on the fundraising of aid organisations are not restricted to public authorities. In 2005, the organisation behind the Dutch Postcode Lottery expanded into Sweden. With a highly professionalised organisation – and marketing focusing on how surplus stream to the well-renowned aid organisations with which the lottery collaborates – The Swedish Postcode Lottery (Postkodlotteriet) quickly became a major player in the lottery market. To decide which aid organisations to support, The Postcode Lottery developed criteria based on, but also going beyond, the 90-account standard (The Swedish Postcode Lottery 2016). Today, 50 non-profits hold linkage to The Postcode Lottery and receive funds from the surplus. Since 2005, these organisations have retrieved SEK 6.1 billion from the lottery, which annually compares to more than 1/6th of total gifts from private persons.

These two examples illustrate the political nature – and potentially strong impact – of institutional linkages to aid organisations in Sweden. Descriptions of all institutional linkages included in this study are found in the next section.

Method

This study's empirical inquiry departed from Baum & Oliver's pioneer (1991) article on institutional linkages to nurseries and day-care centres in Toronto, Canada. As described above, Baum & Oliver (1991) found that organisations could significantly increase performance by connecting to other important organisations. But the theoretically as well as empirically appealing proposition that being institutionally linked increases performance raised a potentially important question: If *a* institutional linkage provides an organisation with performance-enhancing legitimacy, should it then not be even better for that organisation to hold multiple linkages? If so, organisations would strive towards having more linkages than their competitors, thus seeming more "legitimate". From Baum & Oliver's studies (1991; 1992; 1996) it is only known that it is better to be connected than not to be. Therefore, while keeping the level of analysis, this study explored whether or not there was merit in viewing institutional linkages as a "ladder", where information about the number of linkages to an aid organisation provided relevant information as for their relative success in fundraising.

This study deviated from Baum & Oliver's (1991) in two additional important aspects. First, this study examined how linkages affected total revenues and not organisational mortality. Thus, more information was derived on the relative performance of aid organisations and it was also possible to perform analysis with a narrower time frame (preferably, survival analysis of the sort used by Baum & Oliver includes data from *all* years since the formation of the organisational field). Second, when empirical inquiries revealed that aid organisations acquired financial resources through linkages, data was *as far as possible* (within the scope of this thesis project) modified to eliminate the resource effect of such contributions. As declared in the next section, this was possible in some cases, but not in all.

Definitions and data

In order to answer the research question, this thesis project required collection of new data. The predominant source of information was The Swedish Fundraising Control's online database, which provided records for all aid organisations found under the 90-account standard. Data gathered there included *total revenues (thousands of SEK)*, which was identified as a good variable for tracing the impact of linkages as it held all fundraising. The database also held information on *financial equity (thousands of SEK)*, which could be expected to limit the scope of fundraising as it to some extent reflects the organisational structure held for fundraising (facilities, technical equipment etc.). Gathered from the database was also a ratio of *administrative costs in relation to raised funds* (a metric used by The Swedish Fundraising Control to ascertain that aid organisations conform to the standard).

By using a "crawler", a program that collects data from online databases according to given instructions, information on 454 aid organisations was gathered from as many pages within The Swedish Fundraising Control's database. This included aid organisations that for one reason (own request) or the other (having their licence revoked) left the industrial standard during the studied period. After removing aid organisations that did not report complete information, data held 339 organisations (year 2012).

As background interviews revealed recent introduction of potentially important institutional linkages to aid organisations (e.g. tax-deduction for gifts, introduced 1st of January 2012) and modified auditing procedures at The Swedish Fundraising Control, it was concluded that the quantitative part of this study should be limited to the three latest years where financial data was available: 2012-2014.

Since the size of aid organisations varies greatly and gathered data included a large number of relatively small organisations – and a small number of very large organisations – natural logarithms were used for variables on *total revenue* and *equity*. A logarithmic scale keeps all variation but compensates for skewness towards larger numbers, which makes it easier to interpret datasets where there are a large number of small observations and few observations holding very high values. As *cost level* was a ratio, natural logarithms were not used for this variable.

Since The Swedish Fundraising Control enforces a long-term cap on fundraising expenses at 25 per cent of raised funds, aid organisations operating at higher levels were either shortly to have their licenses revoked (if they could not lower costs) or were closing down. To avoid disturbance from these outliers, aid organisations reporting cost levels beyond the cap were given the value 25 per cent (0.25). All additional variables were dummy variables, where aid organisations fitting the description were given *ones* and all others *zeros* (e.g. one if aid organisation qualified as recipients for tax-deductible gifts).

With the decision to use *total revenues* as the dependent variable within the statistical model followed the importance to – as far as possible – remove resources distributed to aid organisations through the institutional linkages from the data. These efforts are declared below. It is however noted that this study, as Baum & Oliver's (1991; 1992; 1996), was not able to fully escape this problem. Resources from The Swedish Postcode Lottery and Radiohjälpen were identified and data manually modified as to remove the pure resource effect from these contributions. However, it was within the scope of this study not possible to isolate funds derived through cooperation with the Swedish state through Sida and tax-deduction (information classified by Swedish Tax Authority). But the statistical model included control variables for each individual linkage, introduced to identify and isolate group-specific variation in data, the resource effect from unidentified funds should not be too severe. However, for this reason and other declared below, the size of predicted increases in revenues as the number of institutional linkages increase were interpreted carefully. Although declaring the size of predicted changes properly in the result section, the conclusions within this study were drawn on the *direction* and statistical significance of predicted values – not the size of predicted changes.

As it was assumed that legitimacy derived from institutional linkages was associated with the aid organisations trademark, rather than with the formal structure, data was manually modified so that aid organisations that were part of the same federation, or shared what a potential donor could expect to be a single organisational trademark, were featured as a single observation (e.g. the four 90-accounts associated with Rotary were merged into one). In these cases, the largest aid organisation (in terms of total revenues) was kept and the smaller ones removed. Since background interviews revealed that it is not uncommon for Swedish non-profits to hold a formally separate organisation for fundraising, measures were taken to ensure that 90-accounts 'owned' or fully controlled by another non-profit were associated with the institutional linkages of the main organisation (a potential explanation for this phenomenon is that it makes it easier to meet the demands of The Swedish Fundraising Control).

Institutional linkages and institutions were defined as proposed by Baum & Oliver (1991:187): "a direct and regularised relationship between an organisation and an institution in the organisation's environment", and "government or community constituents in the organisation's task environment that possess either communitywide and uncontested social acceptance (e.g., public schools, churches) or legislative and administrative authority in the

organisation's domain (e.g., government agencies, regulatory commissions)". Departing from these definitions in the background interviews with representatives of key institutions in the empirical setting of aid organisations exposed the institutional linkages included in the quantitative analysis. As given by the definitions above, identification of institutional linkages tests the perceptiveness of the student deploying them. In a future study with greater resources, the "social acceptance" and "administrative authority" of institutions could be validated using for example surveys. But with the scope given to this project these notions was interpreted contra-factually: only institutions that had several aid organisations linked to it – and a purpose which argued potential bearing on performance of aid organisations – were included.

The operationalizations above led to the identification of the following institutional linkages (Table 1). The columns describe (in due order): the number assigned to each particular linkage in this study, name of the *linkage-providing* institution, the type of institution (governmental or non-governmental), number of aid organisations linked to it (2012), and finally four categories explaining the nature of the institutional linkage – if it provided access to funds, advertisement, contributed to advocacy work or if it enabled resources for organisational development.

Table 1 – Identified institutional linkages

No.	Linkage to	Type	Holders (2012)	Access to monetary funds (Tax-incentive)	Access to advertisement	Advocacy work	Org. development
1	<i>Swedish state</i>	Gov.	67				
2	<i>The Postcode Lottery</i>	NGO	48	X	X		
3	<i>Sida</i>	Gov.	15	X			
4	<i>"Ramorganisation"</i>	NGO(s)	75	X		X	X
5	<i>FRII</i>	NGO	117			X	X
6	<i>Concord</i>	NGO	30			X	
7	<i>Radiohjälpen</i>	(Gov.)	45	X	X		
8	<i>Socialforum</i>	NGO	20			X	X
9	<i>Ideell Arena</i>	NGO	25			X	X

Linkage No. 1: To the Swedish state/Tax Authority

This linkage was achieved when an aid organisation obtained status as recipient of deductible gifts (Swedish Government 2011). The general tax-deduction level was 25 per cent of gifts within a span of minimum and maximum deduction (Swedish Tax Authority 2015). When qualifying as tax-deductible recipients, aid organisations had to submit to certain formal requirements (similar to, but more rigorous than, those of the 90-account industrial standard). Aid organisations also paid an application fee of SEK 10 000 and an annual service fee of SEK 7 000. A total of 78 non-profits – of which 67 held 90-accounts and therefore fell into this study's definition of aid organisations – were approved for deductible gifts.

In 2013, a total of 761 000 swedes made tax-deductions for gifts of a SEK 1.3 billion (Swedish Tax Authority 2014). There were no monetary transactions going from the state to aid organisations. Instead, individuals donating to a tax-deductible recipient received a tax-credit in their annual declaration. Thus, it was a matter of definition if (parts of) these funds should be removed from data or not. However, this did not present a methodological problem since The Swedish Tax Authority classified how gifts distributed over aid organisations.

Below follows short descriptions of similar character for all other included linkages.

Linkage No. 2: To The Postcode Lottery (Svenska Postkodlotteriet)

This linkage was achieved when an aid organisation signed a formalised contract with The Postcode Lottery, agreeing to be used in advertisement and in turn receiving annual funding (The Swedish Postcode Lottery 2016). The Postcode Lottery reviewed applications once a year and to qualify, aid organisation did first have to hold a 90-account and be member of the industrial organisation The Swedish Fundraising Council, Frii (see linkage five). During the three years studied here, The Postcode Lottery annually distributed around SEK 1 billion to aid organisations holding linkage to them. Data was manually modified as to fully remove the resource effect of contributions from The Swedish Postcode Lottery.

Linkage No. 3: To Sida, The Swedish International Development Cooperation

This linkage was achieved when an aid organisation gained (or held) status as “ramorganisation” at the Swedish foreign aid authority, implying that the organisation was authorised to wield government aid funds (Sida 2011). Formalised cooperation with larger aid organisations has been a vital part of Swedish foreign aid policy for decades. Up until 2011 however, the status of “ramorganisation” was exclusively based on tradition. Since then, new aid organisations have been allowed to apply in certain intervals.

During the studied period, the following organisations held status as “ramorganisation”: Diakonia, Svenska Missionsrådet, RFSU, MyRight, Forum Syd, Afrikagrupperna, Kvinna till Kvinna, Olof Palmecentret, We Effect (previously Kooperation Utan Gränser), LO/TCO:s Biståndsnämnd, Naturskyddsföreningen, Världsnaturfonden (WWF), PMU Interlife, The Church of Sweden, Plan International Sweden, Individuell Människhjälp, Save the Children Sweden and Svenska Afghanistankommittén (SAK).

Linkage No. 4: To one of Sida’s “ramorganisationer”

This linkage was achieved when an aid organisation gained (or held) membership in one of Sida’s “ramorganisationer” (see linkage three), thereby qualifying to apply for distribution of foreign aid funds (Sida 2011). Public information from all “ramorganisationer” (above) were examined as to determine if they held formalised cooperation of the sort qualifying as institutionalised linkages in this study. This process rendered identification of close to 400 individual linkages, of which 117 were to aid organisations found under the 90-account industrial standard and therefore included in this study.

Since Sida’s “ramorganisationer” and their members are not public authorities and their procedure for managing these resources varies, it was beyond the scope of this study to isolate and remove the Sida funds. This implied that this study, as Baum & Oliver’s (1991; 1992; 1996) could not fully isolate the institutional effect. The full removal of resources derived through linkages would have enabled even stronger conclusions as for the role of linkages.

Linkage No. 5: The Swedish Fundraising Council (Frii, Frivilligorganisationernas insamlingsråd)

This linkage was achieved when an aid organisation gained (or held) membership in The Swedish Fundraising Council, an industrial organisation for aid organisations (Swedish Fundraising Council 2016). Membership was not associated with additional funds and organisations paid an annual fee.

Linkage No. 6: Concord

This linkage was achieved when an aid organisation gained (or held) membership in Concord Sweden, the Swedish branch of a European advocacy organisation concerned with foreign aid

policy. Membership was not associated with direct access to additional funds and aid organisations paid an annual fee. Concord Sweden had 30 members.

Linkage No. 7: Radiohjälpen

This linkage was achieved when an aid organisation gained (or held) linkage with Radiohjälpen, which organises fundraising activities within the three Swedish Public Service companies. During the studied period, Radiohjälpen annually raised about 130 million SEK, resources which were distributed to aid organisations via project applications. During the period studied here, Radiohjälpen implemented a new policy stating that aid organisations had to qualify for “partnership” before applying for funds (only holders of 90-accounts could become partners). Historically, all aid organisations found under the 90-account standard could apply on an annual basis. Since this reform took place during the scope of this study, institutional linkages were here defined as an aid organisation *either* achieving “partnership status” *or* receiving project funding in two out of three studied years. Contributions from Radiohjälpen, to 45 aid organisations in this study, were identified and successfully removed from data.

Linkage No. 8: The National Forum for Voluntary Organisations (Socialforum)

This linkage was achieved when an aid organisation gained (or held) membership in The National Forum for Voluntary Organisations, an umbrella organisation aiming at promoting voluntary social work. Membership was not associated with direct access to additional funds and aid organisations paid an annual fee. The National Forum for Voluntary Organisations had 36 members, of which 20 were holders of 90-accounts.

Linkage No. 9: Ideell Arena

This linkage was achieved when an aid organisation gained (or held) membership in Ideell Arena, a partnership network which aims at gathering and diffusing research and knowledge about non-profits in Sweden as to achieve leadership and organisational development within membership organisation. Membership was not associated with access to additional funds and aid organisations paid an annual fee. Ideell Arena had 70 members of which 25 held 90-accounts.

The institutional linkages presented above translated into 442 linkages (2012) to aid organisations under the 90-account industrial standard. The left-hand numeric column in Table 2 (below) shows the frequency distribution for aid organisations holding each number of institutional linkages after excluding organisations that reported no revenues and organisations that were excluded based on modification of data described above (e.g. belonging to the same federation).

As the continuous variable on the number of institutional linkages held few observations in the higher number of linkages, a new categorical variable was created where observations were grouped as to display organisations holding 0, 1, 2, and 3 or more number of institutional linkages (centre numeric column, below). This was motivated by noting that for institutional linkages to be associated with performance-enhancing legitimacy they should be observable, but in a decision-situation of a donor “more” or “less” legitimate is probably closer to the truth than the exact number of linkages. The main aim of this study was to determine if multiple linkages were better than one and, thus, if further efforts should go into examining institutional linkages beyond the operationalization of Baum & Oliver (1991). To answer this question, it posited no major problem that there were few observations in the

higher number of linkages. This aim also motivated the use of *one linkage* as the base level for statistical analysis, as this reveals movement beyond this “threshold”.

As it was logical that the development of theory proposed in this study required that Baum & Oliver’s (1991; 1992; 1996) original predictions, where legitimacy was viewed as existing or not, also rendered statistically significant support, a new dummy variable (BaumOliver) was created. All aid organisations that held at least one institutional linkage that year (regardless of which and how many) were given *ones* and all unlinked organisations zeros.

Table 2 – Frequency distribution of number of institutional linkages (Year = 2012)

Linkages	Continuous <i>(raw data)</i>	Categorical <i>(used in model)</i>	BaumOliver <i>(used in model)</i>
0	159	159	159
1	75	15	189
2	43	43	
3 (+)	25	62	
4	11		
5	9		
6	7		
7	6		
8	3		
9	1		
Total	339	339	339

Model

The definitions described above led to the construction of a statistical model where the research question was answered using multiple linear regression. This method traces the statistical impact of (independent) variables, which theory and empirical survey suggests may have play role in explaining results (*number of linkages, equity, cost level*), on the (dependent) variable where the affect is measured (*total revenues*).

The model tested the relevance of viewing the number of institutional linkages held by an individual aid organisation as an indicator of the total revenues of that organisation in the year observed (i). In order to, as far as possible, control that variation in data could actually be attributed to the *number of linkages*, the model measured the effect of *equity* and *cost level* and controlled for *trends* over the three years included in the study (Year 2012 and Year 2013, with 2014 as baseline). Finally, the model controlled for *each individual linkage* as to see that it was not only the possession of a specific linkage that rendered results.

To illustrate the potential elusiveness of institutional linkages as an abstract notion, the model was run twice – the first time without control variables for each individual linkage (the left hand execution of the model below was only for reference). Mathematically, the model was defined as:

$$y_i = \alpha_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \alpha_6 X_{6i} + \alpha_7 X_{7i} + \alpha_8 X_{8i} + \alpha_9 X_{9i} + \alpha_{10} X_{10i} + \alpha_{11} X_{11i} + \alpha_{12} X_{12i} + \alpha_{13} X_{13i} + \alpha_{14} X_{14i} + \varepsilon_i$$

Notations

$y_i =$	Dependent variable = Total revenue in the year observed (<i>modified as to remove identified resource effects, logarithmic scale</i>)
$(\alpha_0 =$	Intercept – no interpretation in this model)
$x_{1i} =$	Number of institutional linkages (Grouped in categorical variable for organisations holding zero (0), one (1), two (2) and three or more (3) institutional linkages)
$\beta_{1T} =$	Impact of moving into next category in terms of number of institutional linkage
$x_{2i} =$	Equity (control variable, logarithmic scale)
$x_{3i} =$	Cost level (control variable, ratio)
$x_{4i} =$	Observation is from year 2012 (control variable, reference 2014)
$x_{5i} =$	Observation is from year 2013 (control variable, reference 2014)
$x_{6i} =$	Institutional linkage 1 to <i>Government (tax deduction)</i> (<i>dummy variable</i>)
$x_{7i} =$	Institutional linkage 2 to <i>The Swedish Postcode Lottery</i> (<i>dummy variable</i>)
$x_{8i} =$	Institutional linkage 3 to <i>Sida (as "ramorganisation")</i> (<i>dummy variable</i>)
$x_{9i} =$	Institutional linkage 4 to <i>a Sida "ramorganisation"</i> (<i>dummy variable</i>)
$x_{10i} =$	Institutional linkage 5 to <i>Swedish Fundraising Council</i> (<i>dummy variable</i>)
$x_{11i} =$	Institutional linkage 6 to <i>CONCORD</i> (<i>dummy variable</i>)
$x_{12i} =$	Institutional linkage 7 to <i>Radiohjälpen</i> (<i>dummy variable</i>)
$x_{13i} =$	Institutional linkage 8 to <i>Socialforum</i> (<i>dummy variable</i>)
$x_{14i} =$	Institutional linkage 9 to <i>Ideell Arena</i> (<i>dummy variable</i>)
$\varepsilon_i =$	Residual term

Statistical tests

In order to answer the research question on the merit of the number of institutional linkages to aid organisations as a predictor of their fundraising, this study deployed a model for quantitative measurement using multiple linear regression, which estimates how included (independent) variables relates to outcome in the studied (dependent) variable. As such analysis rests on several assumptions about underlying data, a series of statistical tests were conducted to reveal potential problems and enclose information about the validity of results.

One such assumptions concerns a common problem within regression analysis, namely that independent variables are too highly correlated with each other, a phenomenon within statistics defined as “multicollinearity”. To start approaching this problem a correlation table was rendered, which shows how included variables relate individually to each other. When estimating correlation, 1 and -1 indicates that values are perfectly correlated (positively or negatively); this means that observations move together in a straight line as they change. Correlation 0 indicates that there appears to be no statistical relation. Below follows a correlation table describing these relations.

Table: 3: Correlation between included variables

	Revenues	Linkages	Equity	Costlevel	Year2014	Year2013	Year2012
Revenues	1.0000						
Linkages	0.6166	1.0000					
Equity	0.7437	0.4217	1.0000				
Costlevel	-0.1687	0.0450	-0.0566	1.0000			
Year2014	-0.0002	0.0047	-0.0138	0.0201	1.0000		
Year2013	0.0070	0.0096	0.0135	0.0064	-0.5063	1.0000	
Year2012	-0.0068	-0.0144	0.0005	-0.0266	-0.5052	-0.4884	1.0000

Evans (1996) prescribed the following interpretation of correlation between variables:

Observed correlation	Interpretation
0.00-0.19	<i>Very weak correlation</i>
0.20-0.39	<i>Weak correlation</i>
0.40-0.59	<i>Moderate correlation</i>
0.60-0.79	<i>Strong correlation</i>
0.80-1.0	<i>Very strong correlation</i>

As shown in Table 3, there was strong correlation between total revenue (Inrevenue) and, respectively, the number of institutional linkages (linkage) and equity (Inequity). This encouraged the notion that there was some information to be found on the total revenue of organisations by taking note of the number of institutional linkages held by that organisation. However, as there was also moderate correlation between the number of linkages and equity, the test advised caution as for potential problems when separating the effect of the number of institutional linkages on total revenues from that of equity. Thus, it appeared that organisations holding higher number of institutional linkages were also larger organisations in terms of equity. But since the correlation between these variables was below 0.7 (Joseph F. Hair 2013) and both were more correlated to total revenues than to each other, results were interpreted as advising caution in conclusions and not as fundamental obstacles for analysis. The low correlation rendered by the variables controlling for included years (Year 2012-2014) indicated that there was no overall time trend disturbing interpretation of results.

To further examine if data held multicollinearity, a VIF-test (variance inflation factor, included in Appendix 1) was conducted. This tested the severity of multicollinearity by measuring how the variance (the squared estimate of standard errors) of regression coefficients increased. The Stata manual (2016: 23) prescribed that a VIF-test rendering results with any estimate larger than 10 was a sign of trouble and so also if the mean of all VIFs was “considerably larger than 1”. The VIF-test rendered no result over 10, but the mean

was larger than one (2.28). However, The Stata manual (2016: 23) postulated that a VIF mean as high as four (4) was not “considerably larger than 1”. But since the highest VIF-value was rendered by the category holding organisations with “3 or more linkages”, results for this group were interpreted carefully.

The final component in the model developed for this study was a term capturing all residual variation that could not be related to other variables in the model. By deploying standard linear regression model, this study assumed that these residuals were normally distributed. Although not affecting estimations of coefficients, non-normally distributed residuals might disturb hypothesis testing. Recommended procedures for examining this distribution vary, but since large deviation from normal distribution can be observed visually, it is often recommended to start with a Kernel Density Estimate of residual distribution (UCLA Institute for Digital Research and Education 2016). This plot (included in Appendix 1) showed residuals distributing close to the normal distribution curve and raised no concern.

However, it is also recommended that this test be followed by plots showing standardised normal probability (*pnorm*) and quintiles of variable residuals against quintiles of normal distribution (*qnorm*), these plots potentially revealing non-normality in middle-range values and in the tails of distribution respectively. These plots (included in Appendix 1) showed no sign of non-normality in the middle range of distribution and only minor signs of non-normality in the tails.

When detecting minor signs of non-normality, UCLA Institute for Digital Research and Education (2016) prescribed that the visual estimation of normality be controlled with a so-called IQR-test, which measures the severity of outliers in relation to desired normal distribution of residuals. The IQR-test (included in Appendix 1) grouped outliers as “mild” and “severe” and while the former are common in all large datasets, presence of the latter should usher additional tests and measures to compensate. Since visual inspection did not suggest presence of significant non-normality and the IQR-test identified no “severe” outliers, it was assumed that residuals were approximately normally distributed and no extra measures were taken (for discussion on residual distribution, see Thomas Lumley et al. 2002).

By deploying a standard linear regression model, this study assumed that there was no heteroskedasticity in data, implying that the distance between the values predicted in the model and the actual observations (the standard errors and thus, the variance = the squared standard errors) were randomly distributed so that there was no general skewness disturbing interpretation of standard errors and statistical significance of estimations. But when testing this assumption, using a Breusch-Pagan test (included in Appendix 1), signs of heteroskedasticity were revealed. This is a significant but common problem within regression analysis that, if not examined further, jeopardises analysis of standard errors, which may be biased as to make results appear significant when they are not. Most importantly, heteroskedasticity warns that the model might be misconfigured (Pischke & Angrist 2009).

Potential explanations for signs of heteroskedasticity in data include measurement errors, both in terms of sampling and survey methodology. But since this study included all aid organisations found under the 90-account industrial standard and financial data collection was done using “crawler” – implying that data mirrored The Swedish Fundraising Control’s online database – other potential explanation had to be explored (given the highly bureaucratic nature of reporting procedures, severe errors in the database was judged unlikely, see Swedish Fundraising Control 2015b).

Commonly, heteroskedasticity arises from the variance increasing with the predicted mean of model. It might e.g. be the case that revenues of larger aid organisations are more volatile than those of smaller organisations, implying that the predictions of larger organisations are less certain than they appear to be, judging from standard errors. By analogy, having a large equity does not in the same way as a small equity pose restriction on the scope of activities. A very large organisation in terms of equity might have its focus elsewhere and raise relatively modest funds, while a small organisation seldom can be expected to perform far beyond what could be predicted.

To determine which variables that held this problem, the Breusch-Pagan test was repeated for regressions holding each independent variable individually against total revenues. This revealed that equity and cost level (but not other variables) showed signs of heteroskedasticity in relation to total revenues. As it is commonly prescribed to from that point commence with visual inspections of content of each variable to determine if there is any for the eye obvious pattern in the residuals, plots were taken for independent variables (rvpplots, included in Appendix 1). For there to be desired independent distribution of residuals, such plots should reveal no pattern as for the general distance between the fitted line and observed values, making the plot look like an “envelope” with approximately as many observations above as below the predicted value. If such inspection give that residuals are roughly the same size it indicates that heteroskedasticity is not severe (Berry & Feldman 1985).

Taking these plots did not reveal severe disturbance. But to ensure that this conclusion was not drawn on a too liberal ocular interpretation of plots, the process of examining the potential problem of heteroskedasticity continued with application of regression models with so called “robust standard errors”.

While traditional standard errors assume that residuals are both independent and identically distributed, robust standard errors relax these assumptions. For cases such as the one discussed here, Pischke & Angrist (2009: 47) advised that “when heteroskedasticity is present, robust standard errors tend to be more trustworthy”. They also argued that as long as the sample was large enough (several hundred observations), as the one studied here, robust standard errors provide accurate hypothesis testing.

In order to determine that robust standard error did not disturb interpretation of results, Pischke & Angrist (2009: 47) prescribes a manual test with dual models comparing the outcome with (normal) traditional standard errors to that with robust, arguing that heteroskedasticity matter a lot only when the change in standard errors is larger than 30 per cent in relation to estimation *or* if any estimation falls below the level of statistical significance with robust standard errors. This test was conducted without either of these two occurring.

Although casting doubt on the accuracy of standard errors if not treated, presence of heteroskedasticity does not cause bias in the estimated coefficients of variables in model. However, the procedure above led to the conclusion that the model should be adapted using robust standard errors when estimating significance of estimations. This did not change the interpretation of estimations, as the use of robust standard errors did not cause any variables to fall from statistical significance (for critical view on the use of robust standard errors, see King & Roberts 2015).

In summary, the method section described collection and content of used data and the construction of the statistical model used in this study. To declare the validity of presented results, the method section also described statistical tests and measures taken to identify potential problems in data. Most importantly, it was concluded that results should primarily be interpreted in terms of *directions* of statistically significant estimations. Sizes of predicted changes are of course properly presented in the following result section. But conclusions refer to whether or not there was support for the theoretical argument developed in the introduction and literature review: If institutional linkages, for the group studied here, served as a prediction of fundraising and if multiple linkages indeed were associated with higher organisational performance than a single linkage.

It is important to not let here presented result translate into unjustified casual claims, suggesting that this study with certainty showed that one thing (additional linkage) leads/does not lead to another (increased revenues). Such arguments lie beyond the scope of this study. It should instead be seen as an attempt to open a window to see if there was anything there that merits further investigation.

Results and analysis

Before answering the research question about whether or not it was useful to look at the number of institutional linkages to an aid organisation when predicting its fundraising, it seemed logical to first test the overall merit of institutional linkages as a determinant of relative organisational success within this particular group of organisations. If Baum & Oliver's (1991; 1992; 1996) findings, where legitimacy was viewed as existing or not, did not render statistically significant results for aid organisations found under the 90-account industrial standard, it would have appeared quite certain that there would be no support for the idea that more linkages were better than one.

Table 4 shows the regression coefficients for each included variable in terms of impact on total revenues (logarithmic scale). For BaumOliver, the coefficient shows the impact of being institutionally linked compared to not being so. For equity, also featured on a logarithmic scale, the coefficient shows the predicted per cent change in total revenues for each per cent increase in equity. For cost level, which was a ratio between 0 and 1 (but with no values beyond 0.25 due to cap from The Swedish Fundraising control), the coefficient shows the predicted per cent change in total revenues for each *percentage point* in increased cost level (note: not per cent).

The value in brackets show statistical t-values, indicating the relationship between estimated coefficient and standard errors (the fluctuation in observed values around the regressed estimated mean of model). A higher t-value indicated stronger results, but since the model was run using robust standard errors to compensate for the potential problem of heteroskedasticity, no detailed interpretation was given to standard errors.

Adjoining stars show whether or not estimations were statistically significant at a significance level of 95-per cent (*) and 99-per cent (**). Analysis and conclusions adhere to the 95-per cent significance level. N indicates the number of observations (998, gathered in the period 2012-2014) and the R^2 -value shows to what degree the variation in the dependent variable total revenue (log) could be related to the independent variables included in the model.

Table 4: Did Baum & Oliver’s original prediction hold true also for aid organisations?

	Revenues (log)
BaumOliver	1.339 (13.55)**
Equity (log)	0.566 (29.28)**
Cost level	-4.617 (7.13)**
Year 2013	-0.033 (0.31)
Year 2012	-0.044 (0.41)
_cons	3.876 (23.10)**
R^2	0.65
N	998

* $p < 0.05$; ** $p < 0.01$

	Revenues (log)
BaumOliver	0.497 (3.90)**
Equity (log)	0.483 (23.15)**
Cost level	-4.940 (7.83)**
Year 2013	-0.040 (0.42)
Year 2012	-0.048 (0.49)
Link1: Government	0.418 (3.75)**
Link2: Postcode Lottery	1.303 (9.13)**
Link 3: Sida	0.519 (2.05)*
Link 4: “Ramorganisation”	0.303 (2.67)**
Link 5: Frii	0.388 (3.21)**
Link 6: Concord	0.333 (1.63)
Link 7: Radiohjalpen	-0.019 (0.14)
Link 8: Socialforum	0.372 (2.55)*
Link 9: Ideell Arena	-0.295 (1.88)
_cons	4.497 (25.97)**
R^2	0.71
N	998

* $p < 0.05$; ** $p < 0.01$

The model testing Baum & Oliver’s (1991) notion of institutional linkages indicated that organisations with at least one institutional linkage raised more funds than those without. The standard errors were small and the p-value was below 0.05, which indicated that results likely did not occur by chance. Also, there was no obvious problem associated with changing the measurement from Baum & Oliver’s (1991) organisational mortality to relative performance.

The left-hand execution of the model illustrates the significant impact of control variables for each individual linkage. The left coefficient for the variable BaumOliver 1.33 (not controlling for each linkage) translates into a prediction of linked organisations raising 133 per cent more than unlinked ones (and so after controlling for equity, cost level and trend). This seemed unreasonable, and by introducing control variables for each individual linkage the coefficient dropped to 0.5 or 50 per cent higher predicted revenues of linked organisations. This is still high, but more reasonable. The impact would probably diminish further with more variables and as noted in the method section, the size of the predictions should be interpreted carefully.

With the reassurance derived from this detour, linkages were thereafter treated using the categorical variable with groups for 0, 1, 2 and 3 or more linkages. Since the aim of this study was set at expanding Baum & Oliver's (1991; 1992; 1996) conceptualisation into a framework where multiple linkage were predicted to be better than a single one, the reference base was set to one (1) linkage. This implied that regression predicted change when moving up or down in number of linkages from the vantage point of one linkage.

Table 5: Main model – Did the number of institutional linkages predict fundraising?

	Revenues (log)
0 linkages	-0.705 (6.63)**
1 linkage (base)	0.000
2 linkages	0.865 (6.10)**
3 linkages	1.546 (10.79)**
Equity (log)	0.505 (24.86)**
Cost level	-4.819 (7.75)**
Year 2013	-0.041 (0.41)
Year 2012	-0.048 (0.48)
cons	5.034 (25.60)**
R^2	0.69
N	998

* $p < 0.05$; ** $p < 0.01$

	Revenues (log)
0 linkages	-0.593 (4.53)**
1 linkage (base)	0.000
2 linkages	0.487 (3.36)**
3 linkages	0.793 (3.21)**
Equity (log)	0.481 (22.91)**
Cost level	-4.929 (7.86)**
Year 2013	-0.041 (0.43)
Year 2012	-0.048 (0.50)
Link 1: Government	0.238 (2.14)*
Link 2: Postcode Lottery	1.054 (7.16)**
Link 3: Sida	0.613 (2.58)*
Link 4: "Ramorganisation"	0.017 (0.12)
Link 5: Frii	0.151 (1.14)
Link 6: Concord	0.296 (1.41)
Link 7: Radiohjalpen	-0.156 (1.14)
Link 8: Socialforum	0.218 (1.46)
Link 9: Ideellarena	-0.478 (2.97)**
cons	5.102 (23.61)**
R^2	0.71
N	998

* $p < 0.05$; ** $p < 0.01$

Also under this operationalization, there was statistical significance for institutional linkages as a prediction of fundraising. The main difference in interpretation in Table 5, compared to in previous model, is that coefficients here indicate change in relation to having one institutional linkage (e.g. the coefficient for three linkages in the right hand execution of the model [0.78] estimates the two-step change in relation to *one* linkage). In the previous model there was only one step – up on the threshold of being institutionally linked.

As advised in the theoretical proposition defined earlier, stepping down from one to zero linkages was associated with a prediction of *lower* revenues and moving to a higher number of linkages with *higher* revenues, indicating statistical significance for viewing linkages as a “ladder”. Since the full model held both the number of linkages and each individual linkage, multicollinearity (the correlation between the independent variables) increased, here seen in the lower t-values in brackets as the predicted result become less certain.

The variable for the different categories in terms of the number of linkages appear to form tidy “steps”. But since the VIF-test advised caution in interpreting the category holding the highest number of linkages (3+), this execution of the model could not conclude that results for this category were significantly higher than the category holding two linkages. However, as the estimations for both 2 and 3(+) linkages render statistical significance for being different from the group holding 1 linkage, there was strong indication for there being relevance in the prediction that an aid organisation holding multiple institutional linkages would perform better than a competing organisation that held only one.

There was also statistical significance for increased organisational equity being associated with *higher* revenues (a 1 per cent increase in equity translated into a 0.48 per cent increase in revenue) and increased costs level being associated with *lower* revenues (a 1 *percentage point* increase in costs level translated into a 4.9 per cent decrease in revenue). The last prediction seems high, but as cost levels only range from 0-25 per cent increasing costs with one *percentage point* is a quite large step. If it, as suggested by the statistical significance in the model, indeed is the case that this result did not occur by chance, a potential explanation is that only very large organisations (in terms of revenue) can ‘afford the luxury’ of operating at very low levels of cost. Or phrased differently: It is reasonable to expect that there (at least initially) is increasing *returns to scale* (cf. Varian 2014) when it comes to fundraising, which here inflates the predicted loss of revenue due to increasing costs.

The dummy variables controlling for trend over the three years included in the analysis (Year 2012, Year 2013) did not render any significant result, which suggests that there appears to have been no overall variation in data that disturbed interpretation of results. The adjusted R²-value of the model was 0.71, which suggested that 71 per cent of the variation in the dependent variable (total revenue) could be related to the independent variables used in the model. This is considered a high adjusted R²-value within statistical analysis in the social sciences. But since R²-values are only one of several estimations of the validity of statistical models, the interpretation is here not that it ‘held 71 per cent of the truth’. Nonetheless, it appeared that the included independent variables were relevant when studying the total revenues of aid organisations.

When reading Table 5, the variables for each individual linkage should be interpreted as having that institutional linkage or not. Particularly worth noting in this group of variables was that only four out of nine individual institutional linkages rendered statistically significant results, implying that the other linkages appeared to have no effect on fundraising that was not captured by other control variables or by the number of linkages. Strongest among those with significant estimations were the linkage to The Postcode Lottery (linkage 2) and it could again be noted that this was so after removing all monetary contributions derived through that linkage. This could be compared to the results for Radiohjälpen (linkage 7), where it after removal of monetary funds was no statistically significance. It is important to again note that this is not a casual claim – it is in this study not determined that one led to the other. The case might just have been that The Postcode Lottery during this period was successful in “picking

winners”, not that these aid organisations success was a result of attaining linkage. By analogy, the tax-deduction for gifts to aid organisations (also rendering statistically significant estimations) might have been biased towards organisations that would have retained higher revenues also without that linkage. Perhaps so after organised lobbying efforts towards the politicians passing the bill? Or it could have been the case that the state encouraged donors to leave other aid organisations as to get a 25 per cent tax refund on their benevolence.

The fact that linkage to Sida showed statistical significance was not surprising since this group of organisations was small and resources acquired through this linkage were not isolated and removed from data. Interestingly enough though, there was also statistical significance for linkage to Ideell Arena being associated with *lower* total revenues. Since this institutions main focus was to offer resources for leadership training and organisational development, it might be the case that this offer was particularly attractive for small aid organisations that did not yet hold own structures for such activities, thus inducing a selection bias towards smaller organisations in terms of revenue and equity.

In summary, execution of models rendered the following statistically significant results:

- For aid organisations found under the 90-account standard, multiple institutional linkages appeared to have been a good prediction for fundraising being higher than for organisations that held but a single linkage. Institutional linkages seemed to serve also under the operationalization of a “ladder” or a scale, but additional inquires are needed before concluding that this effect endures for higher number of linkages.
- Baum & Oliver’s (1991; 1992; 1996) main hypotheses rendered statistically significant results also for aid organisations and under the operationalization of relative success in terms of total revenues. Thus, it was again showed that the relevance of linkages is not isolated to analysis using the ecological notions of organisational mortality deployed by Baum & Oliver (1991).
- Organisational equity and cost level both rendered significant estimations for predicted influence on revenues of aid organisations. As could intuitively be expected, increased equity was associated with higher revenues and higher costs with lower.
- The impact of individual institutional linkages varied to the extent where some linkages where associated with very high increases in total revenues whilst one suggested decreased revenues. However, most institutional linkages (5/9) where themselves insignificant after controlling for equity, cost level, trend and the number of institutional linkages.

Discussion and conclusion

Building on the theoretical and empirical notion of institutional linkages (Baum & Oliver 1991; 1992; 1996), this study suggests that *the number of institutional linkages* can help predict relative success in groups of organisations. Treating the legitimacy derived from institutional linkages as a “ladder” or scale – and not as done by Baum & Oliver (1991), as only existing or not – also appear to be a significant prediction of fundraising among the aid organisations found under the Swedish 90-account industrial standard. In other words: Having more institutional linkages does indeed appear to be merrier than having but a single one.

In their concluding remarks, Baum & Oliver (1996) argues that it is a defining feature of non-profit organisations to differentiate themselves by establishing institutional linkage(s). With the result rendered here, it is reasonable to expect that this competition will endure beyond the “threshold” of attaining a single linkage. That aid organisations want to be linked to powerful organisations in the institutional environment is not surprising. In this study, resources derived through these linkages were as far as possible (within the scope of this thesis project) removed. But for aid organisations these contributions often have a substantial impact on total revenues. In the case of The Postcode Lottery, linkage often implies a 10 per cent increase in total revenue and the most favoured aid organisations receive more than 50 million SEK annually. However, this study showed that there appears to be additional gains beyond the monetary resources. Linked organisations appear to be viewed as more “legitimate”, at least under the condition that “legitimacy” drives donations.

One intuitively appealing explanation for why it is better with multiple linkages than with a single one is as simple as that donors perceive some, but not all, such affiliations. In Baum & Oliver’s (1991; 1992; 1996) case, some parents deciding where to leave their kids would care about which day-care centres their church recommends, while others would be more interested to know if economic surplus is reinvested or ends up in the pockets of private owners. In the case of the person who in the introduction to this thesis wanted to contribute to better cancer treatment, he or she might be made aware of Cancerfonden’s work through the advertisement regularly sent out by the Postcode Lottery, or he or she could take impression of the fact the several of the aid organisations concerned with better cancer treatment are affiliated with the largest hospitals in Sweden.

However, it is also possible that the positive relationship between institutional linkages and revenues is not so much a direct proxy for legitimacy, but for different forms of advertisement derived through cooperation that in turn makes the aid organisation appear more attractive or “legitimate”. An ideal study of the problem discussed in this thesis would have included a control variable for the advertisement budget for each aid organisation. However, no such data is currently available and since aid organisations traditionally have been allowed generous amounts of “pro-bono” advertisement in traditional media (e.g. newspapers, television, public transportation), it is likely that such an inquiry, to be fruitful, would require collection of information on the *public exposure* available for each aid organisation. In other words, a vast empirical undertaking.

Although not exploring the effect when linkages are stacked on each other to become a “ladder”, Baum & Oliver (1991; 1992; 1996) did indeed argue that the impact of linkages would vary with the legitimacy attributed to different linkages by surrounding institutions and stakeholders. The identification of the nine institutional linkages included in this study was driven by background interviews conducted early in process and by looking specifically at some of the well-known aid organisations in Sweden and following their trademarks into

different kinds of networks, federations and interest groups. Continuing this work – and eliminating linkages that rendered weak results along the way – would probably further increase the robustness of the model and fortify the results presented above. Future inquiries into the nature of institutional linkages could include a test for measuring the “social acceptance” and “administrative authority”, characterising institutions in Baum & Oliver’s (1991) definitions. However, with the initial assumption in this study that institutional linkages provide aid organisations with legitimacy that translates into increased fundraising, it is hard to measure the legitimacy of institutional linkages by any other standard than that they drive resources – either through the linkages in the form of grants or in the form of legitimacy translating into a general increase in fundraising. But institutional linkages might also have ceremonial qualities (cf. Meyer & Rowan 1977) or, as the 90-account industrial standard, function as an indication of organisational financial hygiene.

All institutional linkages included in this study were to public authorities or well-established non-governmental organisations within the field of organised fundraising and aid-work. Therefore, also links that appear to have little, no or negative impact on fundraising were allowed to remain in the model. That variation brought in by including these institutional linkages ends up in the number of linkages (and not in the individual linkage) is also an indication in relation to the operationalization of theory in this study. The fact that the study still rendered statistically significant results did of course also contribute to the conclusion to leave these links in.

In terms of causality, it is not possible to claim that an organisation will increase its total revenues by acquiring an additional institutional linkage. Such a claim would require a fixed-effect analysis over a time period where there is significant variation in the possession of linkages, or that the introduction of a new linkage can be treated as a natural experiment. These paths were explored early in this thesis project, but abandoned since the interview with the controller at The Swedish Fundraising Control, where financial data was gathered, revealed that changes in accounting and audit procedures in the years prior to those included in this study would have made interpretation of results over a longer period of time uncertain. Expanding the study to a time frame where there is significant variation in the number of institutional linkages would also have implied an increase in empirical material that would have brought this thesis project well beyond the scope of the course. Even with this “little” variations in linkage attainment, this study still rendered 442 observed institutional linkages (2012) over nine different institutional entities. Moving further back in time would also have brought this study deep into the archives of the organisations wielding the institutional linkages. The format deployed here could be managed through background interviews with key *linkage-providing* institutions and following correspondence via email.

Additional implications for future studies

Once data about 2015, the final year with tax-deductions for gifts to aid organisations becomes available (autumn 2016), the empirical material gathered here could be used to determine the effect of that linkage on overall fundraising. This would be particularly interesting in light of that the principal objection against the introduction of the tax-deduction (apart from legal objections, see Ministry of Finance 2015) was that it would skew civil society further towards marketization and business practices (cf. Wijkström 2011). On a similar note, it was interesting to note that the institutional linkage to the traditional charity fund Radiohjälpen did not render any statistically significant result, while that to The Postcode Lottery appeared strongest. Especially so considering that the latter established itself in Sweden under an at the time (2005) quite controversial slogan and business concept: “Market Driven Charity” (Novamedia 2009).

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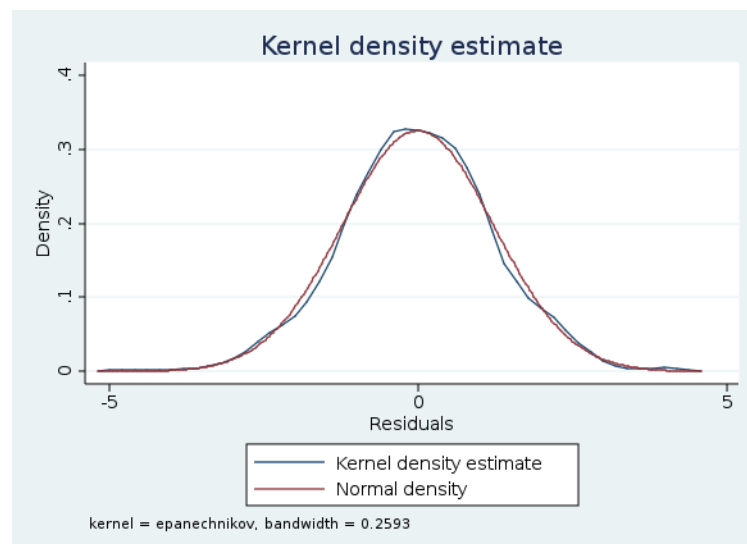
Appendix 1: Tables and plots rendered for statistical tests

For information about tables and tests, see methodology section.

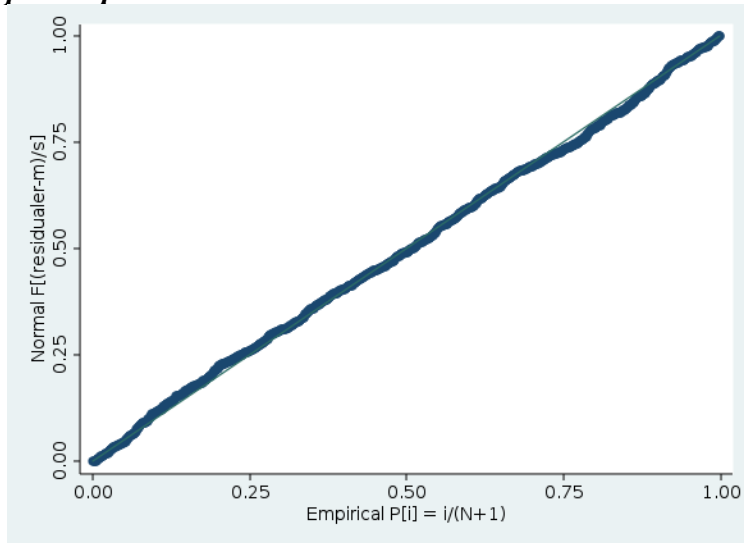
VIF-table

Variable	VIF	1/VIF
Linkage = 0	3.42	0.292219
Linkage = 2	1.98	0.505437
Linkage = 3	6.39	0.156479
Equity	1.35	0.739633
Cost level	1.05	0.953507
Year2014	1.35	0.742443
Year2013	1.35	0.743022
Link1 Government	1.82	0.550318
Link 2 Postcode	2.08	0.479805
Link 3 Sida	1.83	0.545513
Link 4 "ramorg."	2.71	0.369036
Link 5 FRII	3.39	0.295198
Link 6 Concord	2.83	0.353705
Link 7 Radiohjälpen	1.82	0.548727
Link 8 Socialforum	1.45	0.691844
Link 9 Ideell Arena	1.71	0.586253
Mean VIF	2.28	

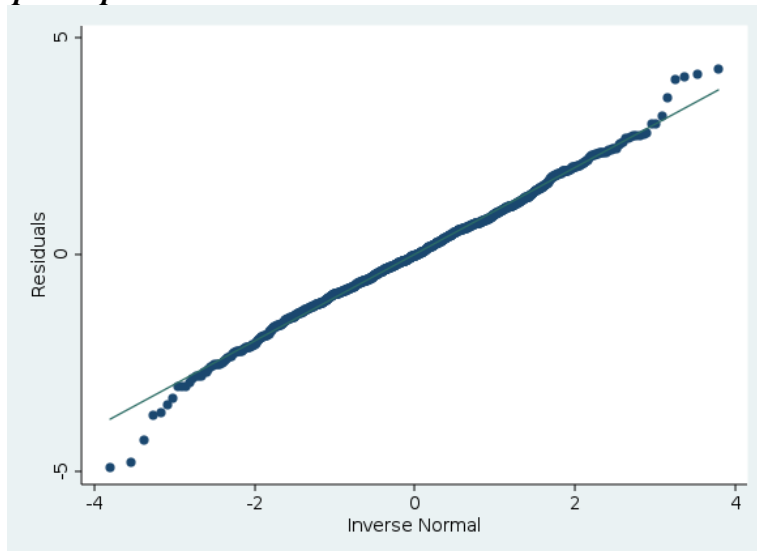
Kernel Density Estimate of residual distribution



pnorm plot



qnorm plot



IQR-test

mean= -1.2e-10	std.dev.= 1.227	(n= 998)
median= -.024	pseudo std.dev.= 1.151	(IQR= 1.553)
10 trim= 2.4e-04		
	low	high
inner fences	-3.117	3.094
# mild outliers	7	6
% mild outliers	0.70%	0.60%
outer fences	-5.447	5.424
# severe outliers	0	0
% severe outliers	0.00%	0.00%

Breusch-pagan test for heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho: Constant variance	
Variables: fitted values of lnrevenue	
chi2(1) =	44.88
Prob > chi2 =	0.0000

rvpplot

