Research funding agencies and the changing governance of the universities – a new dynamic? The case of Sweden during the 2000s

1. Introduction

In most European countries different research funding agencies have been set up to promote scientific knowledge and its application in specific areas. While research funding bodies shares many characteristics with other types of governmental agencies, the policy context of these agencies is characterized by its markedly strong imbalance between political and scientific actors. Even if funding agencies are driven by the interest of policy objectives, they also tend to identify themselves strongly with the scientific community, although primarily with individual researchers or research groups, not the universities as organisations.

However, since the 1990s the research and higher education systems have in many European countries undergone reforms, changing the relationship between the state and the universities, and making the relationship between funding agencies and universities more complex. Firstly, by reforms intended to grant more autonomy to the universities, which, combined with a performance based funding regime, have made them acting more as strategic actors in issues concerning research funding. Secondly, research funding is increasingly distributed through large long-term grants, for example to centres of excellence or research centres, making the competitions between universities for research grants stronger.

The purpose of this paper is to analyse the relationship between research funding agencies and the universities in Sweden during the first decade of the 2000s. During this period the policies of the Swedish public research funding agencies was to a larger extent than before designed to involve the university leadership in different programs supporting research milieus, for example by demanding co-funding or that the university leadership should be involved in making priorities of research projects, which contrasted to the traditional policy of only focusing on the support to individual researchers and research groups. Engwall and Nybom argue that this is an indication of that the agencies are “moving from the traditional form of individual research funding towards a more institutionally based funding strategy” (Engwall & Nybom 2007, p 42). In this paper I will analyse these policies, how they have affected the structure of the relationship between the funding agencies and the universities, and what

1 With “university leadership” I will in this article mean the central level of decision making at the university, in Sweden primarily formally the vice chancellor, and the university board, although formally the vice chancellor makes most decisions in a consultation process including, for example, the deans of the faculties.
consequences they have had on the evolving research strategies of the universities. The overall objective of the article is to get a deeper understanding of the changing dynamics in the relationship, in terms of steering and coordination, between the research funding agencies and the universities.

I mean that the Swedish case is generally interesting for several reasons. For example, the importance of external competitive funding from research funding agencies to the universities is higher than in many other European countries (Vetenskapsrådet 2008, p. 15), making the research funding agencies important instruments for governmental steering. Furthermore, the universities are the main performers of public research, even more applied research, in Sweden since there are relatively few research institutes, which makes them important objects of governmental policies. Interestingly enough, the higher education sector has, as in many other countries, also undergone major reforms in the past decades, making them, formally, more independent of the central government. Hence, it is an interesting research question to analyse how the universities, on which the government has so great expectations, can deal with these demands from the government and its funding agencies. Furthermore, it seems that the many reforms of higher education and research might have led to problems of coordination and integration of the research funding system. For example, a recent study shows that the system, due to a long period of layering new policies and organisational reforms in these policy areas, has become “relatively well endowed, but weakly governed” (Benner & Öquist 2012, p).

In the first part of the article the theoretical basis of the analysis of the research problem is outlined. The starting-point will be a principle-agent perspective on the relationship between the state and the university, analysing the relationship as a problem of delegation. In the second part, I will analyse the relationship between research funding agencies and universities in Sweden. I will first analyse the overall development of the government’s research funding policy, followed by an analysis of the policies of the research funding agencies policies in relation to the universities, and, finally, an in depth analysis of one university and its relationship with research funding agencies. The empirical part is based on my earlier studies of research funding organisations in Sweden, secondary sources, and a case study of Linköping University. Finally, in the third part, I will discuss the results based on the theoretical perspective.

2. Theoretical perspective

How can we understand the relationship between the research funding agency and the university? The literature on research policy has often used principal-agent perspectives in analysis of the relationship between the state and the scientific community. For example, Dietmar Braun analyses the relationship as an issue of delegation where “one side, the policy makers, ask the other side, the scientists, to do something for them that they cannot do themselves, because they lack the capabilities of the knowledge the scientists have” (Braun 2003, p. 310). Hence, the relationship is characterized by its markedly strong imbalance, asymmetry, between political (the principals) and scientific actors (the agents). In the terminology of the principal-agent literature, such asymmetries can be expressed as marked problems of adverse selection and moral hazard. The adverse selection problem means that the politicians usually lack the knowledge to pick the most competent agent, the moral hazard problem that the politicians usually have problems evaluating the results of the work of the scientists (thus a monitoring problem).

Although this model is simplistic, it points to important circumstances in the relationship between politics and research, which relates to the conditions of research funding bodies and its relation to the scientific community. In principal-agent literature, research-funding agencies have specifically important roles in managing or mediating this relationship (Braun & Guston 2003). Dietmar Braun’s
discussion of the issue treats funding bodies as the intermediary institutions in a “triadic structure” (Braun 1993). Thus the funding body is, in this perspective, both an agent to the government (or the politicians), and a principal in relation to the researchers (Braun & Guston 2003). However, as shown by many studies, the role of the intermediary agency varies, which partly depends on the strength of political demands, and the position of the scientific community, but also on the capacity and strategic capability of the intermediary agency in balancing the relationship. Hence, the “configurations” between principal, intermediary and agent varies. Barendt Van der Meulen means that the specific form of different configurations depends, for example, on the interests of different actors, but also on the different structural characteristics: the possibilities of principals of finding other agents, and vice versa, and the existence of alternative mediations structures (Van der Meulen 2003).

The different types of configuration can be illustrated by different “ideal-type intermediaries” of the 20th century. The traditional research council can, for example, be seen as an expression of the so-called Bush model; a model based on trust between politics and science and self-steering of science. The councils identify themselves strongly with the scientific community, and the monitoring is organised by peer-review processes. The mission oriented agency can be seen as an intermediary more driven by the interest of policy objectives, although, as shown by Braun still strongly dependent on the interest and support of the scientific community (Braun 1993). In a general discussion of research funding agencies Braun means the clientele can even be said to “comprise a part of these agencies” (Braun 2008, p. 235).

The main focus in this article is the relationship between the research funding agency and the university, which is somewhat more complex. The discussion of the “agent” in the principle-agent oriented literature is, of good reasons, mainly focused on individual researchers or research groups. While formally the recipients of grants from the funding agencies are institutions, such as universities, this is not usually assumed to be of great interest since the university does not exert any strong directional control of the researchers (Morris 2003, p. 360). Whitley (2008), for example, means that the possibility for universities to act as strategic actors, in a similar way as private corporations, is strongly limited. He argues that there are several barriers or constraints that make it difficult to determine collective objectives, ensure collaboration and integration of work activities to achieve organizational goals, or to evaluate work performance. Instead the organization and funding of the research is controlled by research and research groups within an international scientific community. Hence, the university can be characterized as a project-based organization that “provides common facilities and services for a wide variety of project teams” (ibid., p. 35). Hence, although the university may formally be said to be the agent of the intermediary agency, it does in practice, from the research agencies perspective, function more as a “hotel” for researchers and research groups.

However, Whitley also means that the strategic capacity of the universities varies, depending on, for example, the structure of policies of national states (ibid, p. 32 ff). During the 1990s and 2000s the governance of science, and the governance of the universities, have in many countries undergone several changes, as in other policy areas strongly related to the ideas of the New Public Management (NPM) that have at least made the university as an actor in this relation more relevant (Pollitt & Bouckaert 2011). Firstly, there is a stronger focus on the competition for students and research funding between higher education institutions. Secondly, the autonomy of the universities has been strengthened. The universities have received a larger freedom of action to develop organisational structures and making priorities, but there is also a stronger focus on leadership- and management issues. Thirdly, there is an increased focus on measuring the performance of the universities. Sörlin describes this as a development from a trust-based funding regime to a performance based funding regime (a part of the “audit society”) (Sörlin 2007).
My point in this article is that the reforms of university governance in many countries, as discussed in the section above, implies, that the conditions of the interplay between the research funding agency and the university, and the state, has changed. What might this imply from a principal-agent perspective? For the funding agency, this might imply stronger tensions with the government, since the government can be assumed to be more interested in strengthening the strategic capacity of the university. It is also in line with governmental policy in many countries to encourage funding agencies to focus on larger, long-term grants, often within areas of national strategic interest. For the university, it means that the university management has a stronger interest in being involved in the relationship between the funding agency and the researchers. This does not mean that the relationship between the research funding agency and the university has become a “two-level game”, where the university acts mediator between researchers (internally) and with the research funding agency (externally), but its surely has made the university as an organization more relevant to include in the analysis.

While the principal-agent literature capture important parts of the relationship, it cannot deal adequately with the fact that these actors (funding agencies and universities) relate to each other on different arenas, levels and in different roles. In many respects the relationship is perhaps primarily one of coordination and negotiation, between in many respect equal actors, rather than steering between principals and agents. The higher education literature has traditionally focused more on horizontal coordination of different actors in the system (see for example Clark 1983). Coordination between funding agencies and universities in the research policy system can be on different levels. While historically, the level of coordination has been low, focusing on what Scharpf has been called negative coordination, such as avoiding policy inconsistencies and conflict, the increasing importance of universities as strategic actors would imply a demand for stronger coordination, such as a wish for cohesion and coherence on priorities etc. (c.f. Scharpf 1997; Braun 2008). The relationship between research funding agencies and universities are also dependent on policies with somewhat different objectives. Research funding agencies are primarily instruments of research policy, while universities primarily are instruments of higher education policy. A more institutionally sensitive perspective would emphasize the historical institutional context of policy-making. The Swedish political system has, for example, historically been characterized by consensus and by many corporative arrangements. Even if the system has gone through changes, one can anyway assume that these structures are still important.

To summarize: The analysis of research funding agencies are to large extent characterized by the intermediary position between politics and science, but the increasingly important role given to the university as an institution, can be assumed to make this position more complex. While the university earlier primarily has functioned as a “hotel for researchers and research groups”, its role can be assumed to develop into becoming, internally, more involved in the handling of external grants, and externally, more involved in a “coordination game” with the funding agencies.

3. Research funding agencies and the changing governance of the universities – a new dynamic? The case of Sweden during the 2000s

3.1. Public research funding of the universities in Sweden: background and reform directions

Usually, universities are dependent on a dual system of state funding for research activities; firstly, by basic funding given through some kind of block grants directly to the universities, secondly, by grants given for specific research projects or programs. Grants for specific projects have, again, usually been allocated by different kinds of research funding agencies. The current structure of Swedish research
funding agencies stretches back to, at least, the 1940s, when a number of research councils were established, some more focused on basic-oriented research and some on more mission-oriented research. As in many other countries, this was a formative moment in the establishment of two different types of modes for research funding. Firstly, the research council model, characterized by a rather “passive” role, allocating research funding through the use of peer review procedures, mainly through a bottom-up process where researchers send in applications, a model mainly used for allocation of funding to basic research. Secondly, the mission-oriented type of agency, characterized by a more active role of supporting research of relevance for specific political objectives, a model used for allocating research funding in a more selective manner. This model was expanding in the 1970s, as a reflection of a more interventionist model of governance (Stevrin 1978).

The two major types of research funding bodies (research councils and mission oriented agencies) were in the 1990s complemented by a third type: semi-public foundations for strategic research. Of primary importance for the Swedish research system was the creation of the Swedish Foundation for Strategic Research (SSF), with the goal of supporting “strategic research”. This foundation had as its role to foster “a new spirit of excellence and competitiveness” and mainly working with support of larger research programs within areas of strategic interest to Swedish industry. While their “innovative” role in the Swedish system of research funding is unclear, their existence has clearly made the landscape of research funding bodies more complex (Benner & Sörlin 2007).

Of major importance was also the major reform of the organization of the major research funding agencies in 2000. A major change was the establishment the Swedish Research Council (in Swedish Vetenskapsrådet, VR), merging the existing research councils for basic research into a larger organization with more “muscles”. Furthermore, two new mission-oriented research funding councils, consisting of parts of a number of earlier mission-oriented research agencies and units, were established. The new mission oriented agencies were, unlike their predecessors, organised along much the same lines as the research councils for basic research, thus reflecting a strong influence by the research community, for example, through the use of peer review in decisions about research grants. Finally, a new agency was created for more needs-oriented research, mainly related to growth and industrial policy, VINNOVA (Benner 2001; Eklund 2007).

Both the Swedish research council and VINNOVA were supposed to be somewhat broader funding agencies than their predecessors. The Swedish research Council was not only to fund research through research grant, but also act as a more strategic agency, making priorities and do analyses of the development of the Swedish research system (a coordinating role). VINNOVA was eventually developed into a broad innovation-oriented funding agency. VINNOVA can in many ways be characterized as rather typical “modern” agency as described in the debate of governance; an agency largely focused on taking new initiatives, enabling actors, networking and “policy learning”. The agency has also to a large extent taken as its role to be the representative or advocate of new innovation policy ideas (broadly speaking); separating it from more traditional research funding agencies, but seemingly making it an expression of the more visionary-oriented character of Swedish governmental agencies noticed by other researchers (Persson 2012; c.f. Lindvall & Rothstein 2006).

One characteristic of the Swedish research system is that the universities has an important role as performers of public research, also more applied research, in the Swedish public research system. Traditionally, research institutes have been anomalies in the Swedish model of research funding: the government has focused its resources on the university sector. Although a number of research institutes exist, they are few, often of marginal importance and have relatively small resources. Sometimes this has been expressed as a result of a specific Swedish research policy doctrine: the
universities should not only perform their traditional roles of teaching and basic research, but also function as “the research institute for the society”. It is often argued that this makes the Swedish system different compared to most other western countries. In many other countries public funding goes to a much higher extent to research institutes. The main arguments for this Swedish doctrine have been, firstly, that a well-functioning higher education system needs a strong research base, secondly, that the university system guarantees research of high scientific quality (Sörlin 2006).

The organization, governance and funding of the Swedish universities have undergone major changes during the last two decades. Firstly, through a radical decentralization and deregulation of the higher education system in the 1990s. The universities received stronger autonomy, especially in educational issues, but also in handling recruitment issues. The universities also became more independent governmental agencies separated from the high chancellor, which now evolved into an evaluation and control agency. This decentralization process continued in the 2000s when the universities received more freedom in deciding on issues concerning internal organization (Prop. 2009/10:149). Secondly, the number of universities and university colleges has increased. This did also strengthened the competition over research funding between old universities and the new universities and university colleges during, especially the late 1990s and early 2000s (Engwall & Nybom 2007). A third, reform direction, emphasized the universities’ role in national innovation policy. The role of the universities should, according to these ideas and demands, not only be to produce students and research but also contribute to economic growth, industrial development, and innovation. The impact of these ideas is visible in policies strengthening the cooperation between the university and industry, patenting and technology transfer offices (see Persson 2008).

Perhaps most importantly the funding of the universities underwent major changes. While external research funding had been important to the universities for a long time, its importance has increased during the 1980s and 1990s. According to Engwall and Nybom external competitive funding increased from 33% in the early 1980s to 55% in 2002 (Nybom & Engwall 2007, p. 41). The trend seems to have been continued in the same direction until the end of the first decade of the century (Vetenskapsrådet 2008). Furthermore, the block funding to the universities became increasingly unspecified. Beginning in 2008 the block funding was not even any more distributed to specific scientific areas, which gave the university leadership a high degree of formal freedom to make priorities and reallocations. In 2008 the government also introduced a stronger performance based regime in relation to the block funding. A minor part of the funding was now to be allocated based on the performance (in terms of external grants and citations) of the university (Prop. 2008/09:50).

The general governance of the research funding of the universities can be described as rather weak. Beginning in the 1980s the government has developed a more coordinated research policy, but it was mainly based on a loose coordination expressed in a research bill every fourth year. In the mid-1980s the government also initiated a more complex planning process, involving both mission oriented agencies and universities, but this planning oriented effort was never repeated (Premfors 1986). An important characteristic of the Swedish political system is that implementation is usually carried out by fairly independent agencies under the auspices of the ministries. The universities are independent agencies, although under the auspices of the Ministry of Education and Research. The Swedish Research Council is under the auspices of The Ministry of education and research, but the mission oriented agencies are under the auspices of different sectorial ministries. The general policy of the government (regardless of which party or coalition that has been in control) has focused on a

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2 A few universities were also turned into foundations, thus giving them an even more autonomous role in relation to the central government.
university-oriented policy, although mainly not by increasing the block grants but by allocating funding through research councils (both basic-oriented and mission-oriented) using peer-review in the application process. This policy was sharpened by the social democratic government in the late 1990s and early 2000s: an increasing part of the public research should be transferred to the universities, but primarily through a process of competitive funding, administrated by the research funding agencies (prop. 2000/01:3). The right-wing government that came into power in 2006 has in all essentials continued on the same path.

The policy on university research funding by the Swedish government during this first decade of the century has been characterized by efforts to strengthen centres of excellence and introduce a performance based funding regime for block funding. The focus of centres of excellence and strategic research areas was the result of a strong will of the government to make priorities. It came to be implemented through grants distributed by the research funding agencies, but initiated directly by the government, to areas of great importance to the Swedish society and Swedish research (Benner 2008). The changes in the allocation of block funding were naturally inspired by similar system in other countries. The main mechanism was that a smaller part of the funding was to be distributed based on the performance of the university, in terms of external funding and citations (prop 2008/2009:50). These reforms should also be seen in the light an increase in the autonomy of the universities. In line with NPM oriented ideas, the point was to give greater autonomy, but at the same time increase the control. In the latest governmental research bill the government put more focus on the support of younger researchers and “star scientists”, even though programs on strategic research at the universities continued (prop 2012/13:30).

3.2. New policies of the funding agencies: the universities as agents?

During the 1970s and 1980s the issue of external funding of the universities did primarily concern so called sectorial research funding, or funding from mission-oriented research funding agencies. The central question was how the universities should be able to handle the needs and commissions of the sectorial research funding agencies. The question was an expression of a sectorial, planning oriented research policy that still dominated during this period. The universities suggested that this should handled by transferring funding from the research funders to the universities, and in that way build up a stronger long term capacity to handle external projects. However, the policy of the government was instead to force the sectorial agencies to use peer review to handle applications from the universities, and thereby strengthen the influence of the research community, rather than strengthening the base funding of the universities (see for example Persson 2001). The policy did also influence the reform of the research funding system that was decided on in 2000 (se above).

Another strategy to mediate between the objectives of funding agencies and universities was to direct the funding to long term grants or research milieus. These kinds of grants became common, especially among the mission oriented agencies, in the 1980s, partly encouraged by the government (Persson 2001). In the late 1990s and early 2000s the demand for these kinds of instruments increased, and now with a focus on much larger and longer term grants, and this time partly due to a wish to focus on centres of excellence, or strong research milieus, as a part of a policy to increase national competitiveness. An important aspect of these new kinds of grants was the importance given to the involvement by the university leadership in the application process. Even if this idea was not new, NUTEK had for example used it in the calls for the so called competence centres in the early 1990s, it became much more common during this period (Persson 2001). The forerunners of these instruments were the programs of the Strategic research foundation (SSF). The strategic research grants of the SSF
did also involve the university leadership in the process of evaluation of applications for research centres (Benner 2008).

The so called Linné program, initiated by the Swedish Research Council and FORMAS in 2004, was perhaps the most important example of these kinds of programs during this time period. The Linné program was these funding agencies interpretation of an initiative by the government to encourage funding for excellent research, or strong research milieus, at the universities. Interestingly, the Swedish research council had originally been critical of these kinds of grants. The council preferred project based funding and funding to research groups on a smaller scale (Benner 2008, p. 317). A characteristic of the grant was that it was to be applied for by the universities as organisations, that is, formally by the university as an institution, not individual researchers or research groups. The applicants for the grant were to be able to show that the university was involved in the program, and that the university could contribute with an essential contribution of the funding (co-funding). The purpose of the program was also to influence the strategies and priorities of the universities. Hence, the new instruments of research funding were to some extent initiated to support the universities as such, not only the research groups. It is worth noting that the design of the grants had been developed in consultation with SUHF (the association of Swedish higher education) and the other major state research funding agencies (Vetenskapsrådet 2005; c.f. Benner 2008).

The initiative of VINNOVA on VINN-excellence centres was based on experiences from the competence centres and came like its predecessor, to emphasize the role of the university leadership in the criteria for success. Even more than earlier calls this one emphasised that the new centres would be in line with the overall strategies of the universities. VINNOVA emphasised that the centres in a clear way should fit in among the innovations- and research milieus that the university gave priority to (VINNOVA 2004). Also one of the major non-public funding foundations for university research, the foundation of Knut and Alice Wallenberg (KAW), developed its general funding policy in a similar direction as the initiatives above. The objective of the funding policy of the KAW that was decided on 2010 was to give the universities better conditions to organise it internal strategies of research (make priorities). This implied, for example, that the application for grants from individual researchers would have to be accepted and based on a priority by the vice chancellor of the university. The application process was also done in consultation with a council consisting of representatives of the major universities and academies (KAW 2011).

The trend of centres of excellence was strengthened furthermore by initiatives by the government on directed funding to “strategic research areas” in 2008. The objective was to let the universities apply for large long term funding for strategic research areas, both in terms of excellence but also of societal relevance and competitiveness. The application process was to be administrated by the state research funding agencies, using peer-review, but the research areas and the funding for each area was decided on by the government (prop. 2008/09:50). Hence, one can conclude that the universities as organisations, the university leaderships, have been given an increased signification in the funding policies and calls of most funding agencies, even though traditional project funding has continued to the main instrument of funding policy. To what extent these policies have led to an increased real influence of the university leadership in these processes is less clear. According to interviews by Mats Benner the priorities of the universities have been less significant for the application processes of SSF and VR (Benner 2008, p. 318). Regardless of the impact, the policy does point to the larger importance given to on the university leadership, compared to earlier calls and policies.

How can we understand these programs in terms of a changing relation between funding agencies and universities? Different actors had obviously different motives: the governments objective seems to
primarily have been to “help” the university to make priorities, and in that way use the public resources for research in a more efficient way. The objective of the government was to make the universities more “strategic” and encourage “excellence”, but it did not trust them enough to make their own priorities.

The Swedish research agency was more ambivalent. On the one hand, it had an ambition to function as a coordinator and promoter of the Swedish research system as a whole, not the least in relation to the universities (Benner 2008). On the other hand the Swedish research council was originally sceptical of the programs, preferring project based funding. This can be interpreted as a reflection of its traditional role as a research council, strongly anchored in the scientific community, and its norms of peer review. For some agencies, like VINNOVA, the objective with the new instrument was more openly to contribute to the transformation of the universities by getting them involved in building strong, and long term, research and innovation environments. The VINNOVA can be seen as an example of an agency with a clear mission, using a combination of persuasion and money to steer. For other non-public funding agencies, for example KAW, the policy to involve the university does also seem to be a matter of finding long-term solutions in cooperation with the university management, in many ways treating the university as a corporation (KAW 2011).

Has the changes in the governance of the universities influenced the relationship between the funding agencies and the universities? The negotiations between the research agencies and the universities on the conditions of external funding seem to have increased during this period. The Association of Swedish Higher Education (SUHF), an organization for institutional cooperation for the universities and university colleges, was established as an important opponent to the funding agencies. SUHF was, for example, the representative for the universities in a dialogue with the major research funding organisations on issues about infrastructure and, not the least, on overhead levels for external funded projects at the universities (an old conflict issue; see Vetenskapsrådet 2008). The universities have primarily had to handle the consequences of the new policies. The strong focus on supporting research milieux decreased at the end of the decade. The programs were criticised, both from university researchers but also from the funding agencies themselves. As will be shown in the next chapter the policies have, however, provided actors at the universities for opportunities for action.

3.3. The university and the new policies of the funding agencies: the case of Linköping

How has the relationship between the universities and the research funding agencies changed from the university's own perspective? This section is based primarily on a case study of Linköping University, but comparisons with the general situation in Sweden will also be made. Linköping University was established in the beginning of the 1970s and developed a reputation as an interdisciplinary and innovative university. Although it originally was mainly focused on technical education and research, it soon also developed interdisciplinary profiles within the areas of health and medicine, social science, and medical research. The strong relationship between the university and the industry, especially within the technical faculty and the SAAB group, did also lead to a strong willingness to get involved in cooperation projects and innovation policy programs. Due to a relatively rapid and successful development of research groups, not the least within areas such as IT and material science, the proportion of external funding rose much faster than the basic block funding for research. The research at the university was to a high degree dependent on funding from mission oriented research agencies, more inclined to support interdisciplinary and problem oriented research groups. Linköping

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3 The case study of Linköping University is primarily based on data from interviews with the university leadership (the vice chancellor, the former vice chancellor, the faculty deans and the senior advisor on research funding issues), the minutes of the university board (2002-2012) and secondary sources.
University was also quite successful in receiving grants from new funding sources in the 1990s, such as funding for material consortia programs, competence centers from NUTEK and funding for centers and PhD schools from the SSF.

The university was less successful in receiving the grants for large research milieus that was initiated in the first decade of the 2000s, for example in the first call of the Linné program. This seems to have made the willingness of the university leadership, to act more strategically, and make priorities, stronger. The vice chancellor, Bertil Andersson, took different strategic initiatives, especially in biomedicine area, and the influence for the vice chancellor on the distribution of the basic funding at the university increased somewhat. The budget proposals to the government during the middle of the first decade of the century showed that the university leadership was concerned about the development. It noted that a larger part of the block funding was needed for co-funding of external grants and that the size of these grants mad it “offers that the university could not refuse”. At the same time, the university noted that its low basic funding combined with the increased demand for co-funding, would in the long run force the university to “say no” to external funding. Furthermore, it noted that the Swedish research Council used the size of the block funding as a criteria, when it decided on the allocation of Linné grants (the larger basic funding, the stronger capacity to handle the Linné grant), which also was a big disadvantage for Linköping (Budgetunderlag 2005).

In the second round of Linné funding the university was more successful, and it also received funding from other similar programs, for example the VINN excellence center programme initiated by VINNOVA. This also led to initiatives to correspond to the governmental initiatives. To be able to compete for major grants in the future, the university also decided to take different strategic initiatives. The primary initiatives were the “LiU foass program” and the “Professor contracts”. The Liufoass (Liu post doc research fellows) was a program which was directed towards young promising researchers at all faculties at the university, and the decision on which applicants that was accepted was taken by the vice chancellor and faculty deans in consensus. All those involved in the process, means that this process worked well, and had a high degree of legitimacy (interviews at Linköping University). The instrument was eventually also copied by several other universities. The aim of Professor contracts was to give the university’s most prominent scientists better conditions for conducting successful research, and to reduce the risk of losing these researchers to other universities. The criteria for obtaining this funding were success in receiving external research funding and publishing. The contract meant that the professor, in return for the funds, promised to be committed to seek funding to the same extent as before, had to participate in teaching and be present at the university. Opinions on this program, which was quite extensive, were rather mixed. A general criticism that emerged from the interviews is that the program disadvantaged new research and that it has built up large surpluses: criticism has also been directed against the criteria for the distribution of funding (Interviews, Linköping University).

It is quite clear that the changes in the policies of the research funding agencies have contributed to a gradual change in the internal distribution of resources at the universities. Strategic investments from governments and funding agencies, and the university's own strategic initiatives have also contributed to a sharp increase in the share of the block grant at the disposition of the vice chancellor. A review of the University Board's budget during the first decade of the 2000s gives a clear picture: in 2003 the vice chancellor controlled about 3% of the total block funding to research and research training; in 2012 the corresponding figure was about 26%. This meant that a smaller proportion went to the university faculties A large part of this increase is directly related to a change in funding policies, e.g. allocation of funds to the government's strategic areas and co-financing of EU projects, but a large part also consists of different initiatives by the University, particularly the programs mentioned, the
professor contracts and the LIU foass program. Especially the professor contracts implied a quite substantial redistribution of resources within the university: in total 70 million SEK was distributed within this program in 2002, that is, almost 10 % of the whole block funding from the university (Minutes of the university boards, 2002-2012).

This does not necessarily mean that the vice chancellor's real influence has increased correspondingly; a majority of the decisions on the allocation of funding is taken by the vice chancellor and deans in consensus, and some of the funding is earmarked. In practice, the allocation of resources within the university is, as before, a process that to a large extent can be described as a bottom up process: decisions are made in a negotiation process that primarily depends on researchers and research groups' ability to get external funding and publish. However, the change has affected the formal power structure at the university, i.e. the preconditions for the game: The formal power of the vice chancellor has increased, the central decision arena has become more important, while the formal power of the faculty boards has decreased. This is also the image that informants at the university present of the developments of the past decade. The vice chancellor level has become more important, at the expense of other levels in the system (interviews at Linköping University).

The interviews also show that the policy of “research grants” as a quality marker has got consequences on other levels of the university. Faculties and departments have their own policies and strategies to distribute extra funding to strategic areas, most often based on the performance of researchers and research groups, in terms of external funding and publication/citation. However, the strategies differ, due to different conditions within different research areas, but also due to different policies and traditions. The faculty of health sciences, and the departments within that faculty, has been strongly focused on distributing extra block funding resources based on performance criteria. This faculty has also been, relatively other faculties, relatively well fed with resources due to funding from the regional county and extra resources for clinical research from the state. The faculty of arts & sciences has been more inclined to also support research at less research intensive departments, which has been a strategy to fulfill the objective of a research based higher education. As mentioned, in reality the departments and faculties do also to a high extent have to contribute to co-funding of research projects (Interviews at Linköping University).

It is quite obvious that the image of universities that characterizes the government and the financier's perspective does not match very well with the image representatives of the university presents. The will to act strategically is more limited. It seems that the research strategies and priorities have primarily evolved as a result of financiers' new initiatives and requirements. The university “goes where the money is”, has seemed to be the main strategy. The character of the formal research strategies (written documents) have also changed over time. The research strategies of the late 1990s and early 2000s had as its main focus to summarize the university’s areas of strength, or potential in the future. The strategies from 2005 and onward, have focused more on the principles for redistribution and the rules of the game. The university has also tried to act more strategically, by supporting the development of groups and formations with the potential to receive center funding (Interviews at Linköping University).

The problem of co-funding became a central issue for most Swedish universities during this time period. The phenomenon is not new, but its importance has changed. First, many funding agencies, as explained above, more and more explicitly called for co-financing (or financing) to a project (generally larger research projects such as the framework project, centers of excellence, etc.), which demanded a statement from the university management (primarily the vice chancellor and the faculty deans). In other cases, external funding implicitly called for co-financing from the department, faculty
or the vice chancellor level, as the projects had de facto not been fully funded. This holds for, for example, grants from the EU and the KAW, both of which do not pay full overhead for research projects. Several studies and surveys have concluded that block funding for the universities does only suffice to fund graduate education and co-funding of external research projects; there is no room for “free” research (see for example Jacobsson & Granberg 2008).

In 2011 the Swedish National Audit Office conducted a fairly comprehensive analysis of the phenomenon. The criticism was harsh: both the government and the universities were criticized for lacking control over how the block grant was used. The analysis showed that a large portion of the block funding was used for co-funding of external research and graduate studies. The survey that was conducted by the audit office showed that most universities had procedures for handling co-funding issues. The study also showed that many co-financing decisions in practice were made at the operational level at the university (for example on the department level). The evaluation noted, however, that the university leadership had an important impact on how the major grants were handled (Riksrevisionen 2012). Linköping University has over time developed more strict routines of how the co-funding issues should be handled, although interviews with university leadership at Linköping University indicate that co-financing requirement is often the subject of negotiation between the different levels of the system. There, for example, still some confusion about which level that is to take cost of co-funding (Interviews at Linköping University).

A general problem shown in the case study of Linköping University, but also by the review by the Swedish National Audit Office of the Swedish higher education system is that the sharp increase in appropriations by major research grants has led to a surplus of research funding: the money is not spent. According to the review an important factor to explain why the universities surpluses have increased, is the increased concentration of the external research funding to a few milieus and researchers. The excellent programs have, according to the review, led to a lock in effect. For example, all funding cannot always be used in the short term (takes a long time to recruit new staff etc.). The consequences of the programs are also an example of a strong Mathew effect: the programs provide more funding to the strongest researchers, with the highest external funding, who in turn benefit from the university's internal allocation of resources, which gives increasing opportunities to seek additional funds, etc. In an analysis of excellence programs such an effect has been observed, showing that the programs have favored older men at the universities (women were disadvantaged) (Sandström et al 2010?).

Has this development changed the relations between the research funding agencies and the university? As mentioned in the last section, the large excellent oriented programs have not disappeared but became less important, and the policy of the government and the funding agencies have been more focused on supporting individual (especially younger) researchers. However, also the new policies of support to individual researchers are to some extent done in interaction with the university. All the funding agencies are eager to point out for the government that they have a close dialogue with the universities, but according to the representatives of the university leadership the contacts are not very frequent. However, a number of contact spaces seem to be important: Firstly, the SUHF (see above) seems to have strengthened its position as a collective organization for the universities in their contacts with the funding agencies (and the government). Secondly, the university leadership has acknowledged the importance of having representatives in the selection committees of the funding agencies. The university has even introduced an extra bonus for a researcher that sits in a committee. Thirdly, although it has not until now seemed to have played an important role, the university leadership has increased its possibilities to influence the application process (but this does not seem to have led to an increase in contacts between the actors). Naturally there are informal contacts, the
funding agencies are, as pointed out, strongly anchored in the research community, but this relation is sensitive to discuss: the strong belief in peer review as a cornerstone of the system makes it important to keep up the borderline between the research community and the university as an institution.

4. Conclusions
During the first decade of the new century a number of initiatives were taken to support centres of excellence and strong research milieus by the Swedish government and by different research funding agencies. An important aspect of these initiatives was the involvement of universities in the application process. Why did the funding agencies involve the universities in the application process? From the perspective of the government and the funding agencies, this policy can be understood as a problem of delegation. To avoid problems of moral hazard, which can be assumed to be significant when large and long-term grants are funded, the principals need to ensure that the university has a stake in the milieus, thus shares the risk of the project. The policy can also handle the adverse selection problem, since the universities are asked to make priorities between projects within the university, thus increasing the possibility of choosing “the best” research groups. For the government, and the more mission oriented agencies, the objective does also seem to have been to transform the universities, making them more inclined to make priorities and act as entrepreneurial organisations. For the Swedish Research Council, the policy should also be understood as a way to implement the demands the government had on the council to act more as a strategic funding agency and take an overall responsibility of the development of Swedish basic research.

Has this led to a changed the structure of the relationship between the funding agencies and the universities? Have the institutions, rather than the researchers and research groups, become the primary agents in the relationship? Even though, the universities are still involved in some application processes, the focus of governmental policy and the funding agencies centres of excellences and strong research milieus are not as strong as in the first decade of the century. Furthermore, the importance given to the universities in some of the application processes seem to have varied. For the Swedish research agency, the strong involvement of universities was ambivalent. As a research council for basic research, strongly anchored in the Swedish research community, project-directed funding seems to have been the preferred instrument of research funding. However, for more strategic oriented research funding agencies, like VINNOVA, the involvement seems to relate to a will to promote the development of more forceful strategies, in different directions. Hence, the structure have changed, the universities as institutions are more important actors in many processes of external funding, but it is still the relationship between the funding agencies and the researchers/research groups that is the primary one.

What were the consequences of the new programs for the universities? As shown by the case study, as well as other sources, the programs had effects on the research strategies and the structure of internal decision-making at the universities. How this opportunity for strategic action has been used has varied, but Linköping University is a case where the university due to high external funding, has used the funding as a “opportunity structure” to strengthen its strategic capacity. The involvement, that the new programs led to, combined with other changes, also led to a higher engagements by the university leadership in external funding issues, for example through a stronger ambition to make priorities, strategic recruitments, and encourage researchers to apply for external funding. The development, together with an overall change in the expectation on the university, has also led to tensions, for example between the different decision-making levels at the university. Although the university is an old institution, which has been successful in handle new demands, it seems to have trouble handling the expectation to be a more “strategic” and corporate actor.
How has the dynamic between the research funding agencies and the universities? As shown in this paper, changes in government policy have led to a partly new dynamic, although more in indirect ways, for example by influencing the development of the research strategies of the universities. The study shows the importance of some level of policy coordination, not the least in a system dominated by relatively autonomous agencies (universities, research funding agencies). Policy coordination between the research funding agencies during the 1980s was rather limited but centralised. When the system was decentralised in the 1990s, the universities the coordination became weaker, but after the research funding reform of the 2000s a more decentralised and ad-hoc-oriented coordination seems to have developed.

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