

DEPENDENT PROGRAMMING

MODELLING STATE INTERFERENCE IN MUSIC PROGRAMMING

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Preface

This master thesis represents the final stage of my studies in Cultural Economics & Cultural Entrepreneurship at the Erasmus School of History, Culture and Communication of Erasmus University Rotterdam. Choosing this topic was based on my astonishment when I could not find any quantitative research on the influence of policies on the artistic output of the cultural sector, since so much has been said about subsidies. This paper is the result of almost a year work and research on this area, focusing on orchestra programming.

I would like to thank my supervisor, Dr. Brouwer, for taking up the task of coach after I found out I no longer had one and for supporting me finishing this research area; his enthusiasm was very encouraging. I very much appreciate that Prof. dr. Langeveld agreed to act as the second reader, and for suggesting Dr. Brouwer as a supervisor.

I also would like to thank Janneke Slokkers and Edgar Nijman of the Residentie Orkest, Merlijn Harms and Arie van Dongen of the Rotterdams Philharmonisch Orkest and Maartje Broekhans of Het Gelders Orkest for helping me with providing data of their orchestras. Finally, I would like to specially thank Pieter Jaap den Haan for his patience and great explanation on statistics.

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Summary

Many cultural organizations are dependent of subsidies and sponsoring as sources of income. To receive sponsoring, agreements are made on conditions. But, applying for subsidization, organizations also have to present why they believe to qualify. These qualifications can be seen as unilaterally conditions set by the government, which possibly interfere with the autonomous programming behaviour of the applicant.

This study researches to what extent governmental interference, by subsidization and by the attached policies, influences the programming behaviour of the professional Dutch symphony orchestras in the Netherlands.

To be able to test this, a conceptual model is built based on existing literature. This enables the testing of the correlations questioned in the hypotheses: (H1) Government subsidies influence the programming behaviour of the Dutch symphony orchestras; (H2) Government emphasis is positively reflected in the musical content programmed by the Dutch symphony orchestras; (H3) Government emphasis on audiences is positively reflected in the locations and formats programmed by the Dutch symphony orchestras.

The various hypotheses are tested using bivariate relations of government interference and the related programming aspects. A multivariate model derived from all statistical significant relations is analysed in a final test to answer the main research question.

This research is a pilot study; it is an attempt of a quantitative approach to test whether the governmental policies attached to subsidization have any influence on the programming behaviour of subsidized arts organizations. The analyses are based on existing empirical material, being two Cultuurnotas that represent the governmental policies and the programs and annual reports of three professional Dutch symphony orchestras.

The analysis conducted confirms only hypothesis 1 and 2. The overall model that reverts to the research question by combining the findings of the various hypotheses shows that 23.6% of the variance of the programming behaviour of the professional Dutch symphony orchestras can be explained by the variance in subsidies and in policies. The lowness of this percentage is most likely due to the lack of variance of the policy variables since only two terms were included in the dataset.

The statistical findings justify a firm stating of these outcomes. It is important to note that, due to the limitations of the dataset, the external validity of these conclusions is not very strong.

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1 Introduction

Throughout the whole world non-profit organizations, amongst them many cultural organizations, face the choice of either opting for sponsoring by a commercial party or applying for subsidy, which mostly comes from the government or from government related organizations. This often results in a financing mix. How these organisations prefer to balance their financing mix is heavily influenced by the traditions and history of their country. In European countries, such as the Netherlands, most performing arts organizations used to prefer subsidies to sponsoring; however, recently this attitude seems to be changing. In the United States of America on the other hand, most performing arts organizations rather choose for private donors and sponsors because they feel they allow them more artistic freedom. Indeed governments and their related organizations that divide the available subsidies display artistic preferences; the Dutch government elite is rather conservative if it comes to music, whereas concerning the fine arts they are interested in all that is new and innovative; differences that are hard to explain (Abbing, 2005).

Currently in Western Europe governments try to enforce a more market oriented approach on the performing arts organizations, promoting corporate sponsoring and private donations. This is partly because less public money can be made available for the cultural sector, but it is also stimulated by arguments such as that public funding of the arts inevitably causes overproduction and bad management (Adair, 1999).

The purpose of this thesis is not to study whether the performing arts should or should not be subsidized, it focuses on the possible relation of on the one hand the artistic programming decisions performing arts organizations make and on the other hand the changes of government policies related to state subsidization.

This thesis starts in chapter 2 with a summary of the history of Dutch cultural policies and related developments in the classical music sector during the twentieth century. Chapter 3 gives a short overview of the research area after which in chapter 4 the problem statement is formulated and the research question defined. In chapter 5 hypotheses are formulated based on the existing literature. A methodological justification of the definitions, the limitations of the dataset and the defining of the variables is found in chapter 6, followed by a description of the data and its possibilities in chapter 7. In chapter 8 the hypotheses are tested and conclusions are drawn in chapter 9. This thesis concludes with a discussion and with recommendations for further research in chapter 9.

2 Background: history of cultural policies

In order to get a better understanding of the cultural policy of the Dutch government regarding the orchestras and the programming behaviour of the Dutch symphony orchestras, a short overview of the developments during the last century is given.

2.1 First half of the twentieth-century

During the late nineteenth and the beginning of the twentieth century, the Dutch government was very aloof with regard to the cultural sector, including music. Also within the music sector an aversion of government interference dominated. In 1918 however, the government decided for the first time to grant subsidy to four of the Dutch orchestras, these were the Concertgebouworkest, Residentie Orkest, Utrechts Stedelijk Orkest and the Arnhemse Orkest Vereniging. Later this was extended to three more orchestras in the cities of Groningen, 's-Hertogenbosch and Maastricht (Samama, 2006).

The music sector was much disorganized at the end of the nineteenth century and not only remained much disorganized, but grew to be ever more chaotic during the first decennia of the twentieth century. This disorganization is likely to be caused by the great diversity of the group, including conflicting social positions and mutual competition. As a result, the music sector didn't manage to increase pressure on the government (Tichelaar, 1987). Due to this dissension, proposals to improve the employment, working conditions and music education remained a profound wish. Several efforts to group together in order to stand strong towards the government failed. In the end all battled rather individually in silence instead of joining forces in public, deviating from other artists, such as writers, actors and visual artists (Samama, 2006).

The nineteen thirties were financially very tough years for the symphony orchestras in the Netherlands. An overall increasing unemployment throughout the entire country resulted in a fall of the subscription income and led to unemployment of a quarter of all musicians. During the Interwar period regional orchestras suffered extra since the Dutch government did only subsidize music life in the West of the Netherlands. Regional or provincial policy was lacking and as a result several regional orchestras and music institutes had to close down, whereas the orchestras in cities had just enough to carry on with (Samama, 2006).

That the government hardly did intervene in the cultural sector during the first decennia of the twentieth century meant none to barely any financial support. On the other hand, it also gave the orchestras carte blanche regarding their programming choices. Throughout the first twenty years of

the nineteenth century Dutch compositions were very rarely played by the Dutch orchestras. In this period of time three Dutch Music festivals were organized during which compositions of living composers were performed. Only in Amsterdam there was some attention for Dutch compositions amongst musicians and conductors (Samama, 2006). Very different from the lack of interest in Dutch compositions, the Dutch orchestras did show an interest in music education, acknowledging the importance of it. In 1912 the Residentie Orkest in The Hague was the first Dutch symphony orchestra to start pedagogic concerts, followed by youth concerts starting in 1924. In the same year, the Utrechts Stedelijk Orkest also started to perform educational concerts, during which the conductor Evert Cornelis chose to perform modern French compositions with explanation on the works by himself. He also conducted prom-concerts for national television and radio and he was the first to include new, contemporary compositions in subscription concert series, embedded in popular works (Samama, 2006). Up till today, this is the standard format for classical concerts.

By 1930 most orchestras performed youth concerts. In 1936 the Amsterdam teacher Frans Aufrecht initiated one hour concerts for his students in order to introduce them to the beauty of classical music. This initiative was such a success that this type of educational concerts grew up to more than a hundred and sixty a year, many prominent musicians and music organizations, including orchestras cooperated (Samama, 2006).

Right from the beginning of the occupation of the Netherlands by the Germans in 1940, the Dutch symphony orchestras received subsidies from the government, improving their financial situation considerably. This was not the only change in cultural policy, but can be seen as a clever move in order to suppress criticism regarding other new policies, resulting in entirely state-controlled orchestras (Tichelaar, 1987). The orchestras were grouped in three classes, determined by size and salary, only the Concertgebouworkest in Amsterdam obtained a special settlement with even higher salaries. An important change in remuneration was that salaries were no longer determined by seniority, but by achievement. Overall the result was a far greater amount of subsidy for all orchestras (de Jong, 2006). The government also became much more involved with the actual programming of the orchestras, emphasizing on the engagement of Dutch soloists and Dutch compositions. Also some music was banned, restraining the freedom in programming choices even further (de Jong, 2006). Adding to these policies, all artists had to become a member of the Chamber of Music and since musicians were depending on public performances, they had little choice and only very few resisted the German order (Tichelaar, 1987). At first the obligation of the Dutch orchestras to performing Dutch compositions was welcomed enthusiastically by the orchestras, but after just a few seasons the enthusiasm faded away because the Dutch compositions were not considered

progressive nor interesting enough (Samama, 2006). During the Second World War however, orchestras were forced to focus more on Dutch music. At least twenty percent of all pieces performed had to be written by Dutch composers and also Dutch soloists were to be given priority. Soon other music was forbidden during the occupation by the Germans, such as all music written by Jews, Englishmen, and all composers from Poland, except Chopin was no longer allowed. Later Russian and American compositions were added to this list. Also French music was confined to time duration. Directly after the liberation all prohibited music was cleared (de Jong, 2006).

2.2 The post-war years up to the Fifties

A couple of months after the capitulation of the Germans, the Dutch symphony orchestras were allowed to take up their activities and the Concertgebouworkest was the first to perform again (Samama, 2006). Already during World War II a group of artists planned for the Federation, an artists' organization to be formed after the liberation in order to have some control over the artistic policy. After the liberation this initially seemed rather promising because the first post-war minister was open to the initiative. But, again it was within the artistic field that too few artists were enthusiastic, musicians in particular. Some of the objectives being political, some personal, but nevertheless, they could be traced back to the pre-war attitude of musicians towards cooperation, and the initiative of the Federation never got the chance to develop and died out within a couple of years (Tichelaar, 1987). Nevertheless, the government's policy during World War II has influenced both the orchestras as well as the policies related to them since. Many changes of the policies that had been carried through by the Germans were found to be irreversible and the idea of art being part of the government's responsibility remained (de Jong, 2006). One of the most essential developments during the post-war period has been the decentralization of culture and cultural policy. Culture had become a political matter and dispersal of the supply of arts and culture and the availability of it for everyone was highlighted (Samama, 2006).

The first Minister of Culture after the liberation set the basis for the cultural policy for the next decades. The basic thought of the structure as set by the Germans was copied, excluding the centralistic attitude of the government which was replaced by some semi-independent foundations, committees and advisory boards. This development is characteristic for the attitude of the government towards the arts. Although the government does want to be in control, the artists remain artistically autonomous by letting them judge the quality (de Jong, 2006). The basis of apportionment of the financial contribution of the state, provinces and local authorities has hardly been subject of change. However, over the years, the orchestras have been seeking for ways to get

the local communities more involved in their activities and finances (Samama, 2006). During the first decades after World War II, all orchestras have become foundations. In 1948 the Voorlopige Raad voor de Kunst, a temporary counsel was established to advise the government on the arts. In 1955 the official advisory board, the Raad voor de Kunst was installed. This first counsel, the Committee Witteman, named after its chairman, was established in order to advise the government in relation to the Dutch orchestras. This committee rearranged the class system for the orchestras, which was originally designed by the Germans. Apart from a few small alterations, this classification of the Dutch orchestras still applies (de Jong, 2006). In 1995 the board was renamed Raad voor Cultuur (Samama, 2006). This counsel is the official advisory board on arts and culture for the Ministry until this day.

The clearance of prohibited music right after the suppression coincided with the abolishing of the obligation to perform Dutch music, resulting in a decrease of interest for Dutch compositions. In 1945 Muziekpodium Gaudeamus was established to offer a stage for young Dutch composers. In 1950 this developed into a foundation focusing on avant-garde composers with an international reputation. Eight years later the Utrechts Stedelijk Orkest, the symphony orchestra of the city of Utrecht, started a series of concerts performing contemporary music in cooperation with Gaudeamus. This concert series was a novelty for the Netherlands at that time (Samama, 2006).

Disregarding international ambitions of some of the orchestras, the national and regional functions of the orchestras, such as subscription concerts, popular concerts, educational concerts and musical accompaniment of choirs have been the basis of cultural policies (Samama, 2006). During the nineteen fifties most orchestras were renamed due to cultural dispersal policies, to underline their regional function rather than their home city (Samama, 2006). The importance of orchestras was measured by their utilization ratio and their repertoire. Differently put: the more romantic repertoire was performed, the bigger the size of the audience and the bigger the size of the audience, the more social relevance it got. Economically and socially, this reasoning is totally valid, but from an artistic and educational point of view it doesn't hold: a piece of art that is popular is not per se artistically good, some art-forms are more easily admired with knowledge rather than out of the blue and most importantly, popularity is temporary, whereas quality remains. Therefore this reasoning has been criticized (Samama, 2006).

During this period the governments' attitude was equivocal. As the then minister Marga Klompé was cited in November 1968 in the *Algemeen Handelsblad*, one of the Dutch newspapers: "Art shouldn't only be something for the happy few, but we must be careful not to drag people involuntarily to the

theatres, because that would be too paternalistic” (Samama, 2006, p. 290). Those years it was seen as the main cultural political task to confront all people with the arts and culture (Smithuijsen, 2007). Nevertheless, the policies and the developments in the cultural field during this time had roughly three effects. First of all it has resulted in a broad varying supply of performing artists. Secondly it has resulted in a considerable network of orchestras and art schools and thirdly a better financial situation for the orchestra members was established (Samama, 2006). But despite these developments, no one was really content with the situation. The government spent money on the arts, but did not see concrete, measurable results; the artists were restrained, due to the long application procedures required for subsidization and they felt underestimated as their artistic works disappeared on shelves and was not being enjoyed (Samama, 2006).

Overall, the budget available for subsidizing the arts increased considerably from 2,4 million in 1946 up to 61,4 million guilders in 1970 (de Jong, 2006). This is roughly a twenty-fivefold increase, although one should note that the inflationary tendency over this period of time is not taken into account.

2.3 From the Sixties into the Eighties

From the fifties up to the seventies three main themes can be found in the cultural policies. One main element was the dispersal of culture. Horizontally, this was given shape in stimulating an increase in the number of orchestras throughout the country. As a result all provinces, excluding Zeeland and Drenthe had its own regional professional orchestra. Vertically, it was given expression to in several functions the orchestras had to fulfil. Besides regular concerts, orchestras also had to perform educational concerts and popular concerts. Also orchestras were obliged to accompany non-professional choirs. These were direct implementations from the opinion that the government is responsible for the eminence of the common people. A second element of cultural policy is the tandem construction of subsidizing. This construction implies that subsidies of the national government and local authorities are linked together. The third element is the ensuing nature of the government’s policies. Art forms already receiving subsidy, such as the symphony orchestras remained subsidized, whereas other genres, such as chamber music, jazz and popular music hardly got any subsidy at all (de Jong, 2006).

From about 1960 up to 1975 society opinion changed considerably, also influencing and changing the cultural sector and its relation to both the audience and the government. During this period of time arts became also more part of the more general political objectives of the Dutch welfare state (Smithuijsen, 2007). During the end of the sixties a common uneasiness grew about the system which

was favouring the traditional institutes, leaving all others with a feeling of being discarded. This was amplified by the depillarization which increased an overall of individualism, personal taste and opposing to the dominant culture. This also applied to the relation of the cultural sector and the government. The discontent about the unequal treatment of different genres was more openly displayed. At the same time the bond of the audience and the arts also ceased, partly because of the emerging of new leisure activities. During that period the overall thought was that the finances of the arts was taken care of by the government and need not any more help (de Jong, 2006).

These developments resulted in a pleading for a new system. Overall three main arguments were used. Firstly, many believed that the policy of dispersion of culture had failed. The supply of culture was considered to be of an overall low quality and also the audiences consisted mostly of the rich and high educated people. Another flaw of the system was the unevenly spreading of the subsidy money. Especially in the music sector almost all money was dedicated to the orchestras which were considered far too expensive, leaving all other music companies without governmental support. The programming of the orchestras was criticized as well as they performed only very few Dutch compositions or contemporary music. The discord with the system amongst composers and musicians not only resulted in writings, but was also reflected in the developments within the music sector. Many new ensembles were initiated, most with explicit programming objectives, either being the performing of modern compositions, or baroque music. Dutch composers reacted subsequently to this development by composing more for these smaller ensembles (de Jong, 2006).

For the Dutch orchestras these developments implied that they needed to be on the lookout for alternatives of their standard concerts. Orchestras literally left the stages to perform on streets, and in the neighbourhood. Meanwhile they continued their subscription concerts in their original form. The first orchestra to find a real alternative was the Residentie Orkest organizing casual educational concert-series of four concerts. Also special tickets including reduction for public transport and even tickets that included a babysitter during the concerts were introduced. In 1972 orchestras organized special concerts in social institutions offering a wide range of music: from baroque music to contemporary music (Samama, 2006). At the same time also educational youth concerts were organized by several orchestras. The success varied greatly per school and per orchestra. Some orchestras had already organized educational concerts for youth before the war. The Residentie Orkest had already started with educational youth concerts at 1912 and the Concertgebouworkest and the Utrechts Stedelijk Orkest had started these concerts respectively in 1923 and 1924 (Samama, 2006).

During the years 1968 until 1976 it was a period of negotiation about the subsidiary system of the music sector, favouring the orchestras, but no real decisions were made (de Jong, 2006). At all levels, national discussion platforms and committees were contemplating on ways to economize and creating scales to divide subsidies. But despite all progress and developments up to the mid-eighties it still did not result in a national unambiguous and future oriented policy (Samama, 2006). Overall, from the nineteen-seventies up to the nineties cultural policy can be described as a period of pinching and scraping, rather than real cost-cutting. Nevertheless this resulted in a 20% decrease of musicians employed by the orchestras (Samama, 2006). Also the number of orchestras was reduced, partly because some orchestras were forced into a merger, others, simply didn't survive the financial cuttings. In 1985 a new government again changed the cultural policy, centralizing decisions, and for the first time in Dutch history, all salaries of the orchestra members were fully subsidized (Samama, 2006).

In 1985 the *Notitie Cultuurbeleid*, a writing of the ministry of Culture on cultural policy established that cultural subsidies are allocated based on quality grounds set by the advisory board, the *Raad voor Cultuur*. In 1987 the Ministry of Culture further decided to allocate cultural subsidies for a period of four years, the so called *Kunstenplanperiode*. Cultural organizations had to apply and hand in a multiannual plan of four years. This same period shows a shifting in the allocation of the cultural subsidies available from the symphony orchestras towards smaller ensembles, composing, improvisation and jazz (Samama, 2006). This four year span for the allocation of subsidy and the decisive role of the *Raad voor Cultuur* is the base of the Dutch cultural policy hitherto.

2.4 The Nineties to now

During the Nineties the government continued with scattershot policies, changing with every new State Secretary assigned to arts and culture. For example, State Secretary Nuis who dealt with culture in the years 1994-1998, obliged during the end of this period the orchestras to spend at least 7 percent of their programming on Dutch compositions. Many orchestras protested against this measure. As a result, the measure was not treated by the government as a firm quota all orchestras had to reach, but more like a guideline without firm monetary penalties (Staten-Generaal, 1996). Shortly after State Secretary Nuis introduced this, his successor Van der Ploeg rescinded this measure. Typical for the Dutch situation the measure was under penalty of toning down the subsidies, rather than providing extra support for those orchestras that would act upon the measure (Samama, 2006).

In the course of the nineties the government implements a measure of 15%-85% for the performing arts organizations to generate more own income: they are obliged to acquire at least 15% own income. Also more distance is created between the setting of the amount of subsidy money for the cultural sector by the Ministry of Culture and the actual allocation based on the cultural content, which now is put out on the NFPK, (Nederlands Fonds voor de Podiumkunsten), a newly established fund, later renamed NFPK+. The objective of this new fund is to strive for international promotion, artistic quality and the maintenance of a multiform and regional dispersal of supply (Ministerie van Onderwijs, 2002). The cultural policies tend to be more and more about procedures and efficiency, rather than the cultural content. Subsidies are continued in order to support the autonomous, artistic value of culture and because of the prevailing opinion that culture needs to be transferred to the new generation by education, but this is no longer valued by the politicians, but rather by appointed experts. Also the public importance of culture seems to be less of a political topic, let alone its surveillance or promotion (Smithuijsen, 2007).

In 1999 State Secretary Van der Ploeg wrote a policy letter identifying that the audience of the performing arts is aging and that the arts organizations are lacking not only in their getting through to the youth, but also that the composition of the Dutch population has changed and that the arts organizations need to focus more on the 'new' Dutchmen. Not waiting for the cultural organizations' adaptability, the requirements to be taken into consideration for subsidizations were such that broader audience participation was obliged. The magical word seems to be "multicultural" (Samama, 2006; Smithuijsen, 2007). Van der Laan, Van der Ploegs' successor, again had another focus. She urged that cultural organizations needed to change their programming towards a demand-driven approach, rather than being supply-driven; also the focus on cultural pluralism was shifted towards integration and intercultural encounters (Smithuijsen, 2007). One continuing trend started in 1987 with the introduction of budget financing, requiring arts organizations to develop cultural entrepreneurship. Since the nineties however, this developed into a different way of assessing the performing arts organizations, increasingly basing their success on the reaching of new and younger audiences and on their own income, rather than assessing their success with respect to content (Samama, 2006, p. 306).

Since the new millennium arts and culture organizations are becoming despondent regarding the incomprehension of the civil servants and the advisory bodies of the ministry of Culture. Despite all governmental inconsistencies and austerity policies, by 2005 the musical life in the Netherlands was still unique and excessive both in supply as in diversity (Samama, 2006). Over the last couple of

years, less political support exists for current production of culture. Except for left winged political parties this is seen as an area for austerity policies (Smithuijsen, 2007). In 2007 the *Cultuurnota*, which is the leading paper regarding the attitude of the government towards the cultural sector and serves for argumentation for the division of the available money for subsidizing culture, shows the political relations at that time. It requests attention for the arts as an autonomous activity, pleads for the promotion of artistic top achievements and internationally appreciated excellence. It also accentuates general participation, rather than the participation of specific segments of the population, dropping cultural diversity of the list of priorities. But it also introduces a so called profit principle, requiring the cultural organizations to generate more own income up to 25%, instead of the 15% that was required before (Plasterk, 2007).

It is yet to be seen whether the government can force these fundamental changes upon the cultural organizations. Not only because of the overall impact, but also because other parties involved, such as the centralized subsidizing funds and the growing awareness of the value of the cultural identity of the ethnic minorities may prove impediments for the cultural sector as a whole and more specifically the musical field. So far it seems that the arts organizations are not yet put out, although not all organizations have survived reorganizations and austerity policies of the twentieth century (Samama, 2006). The dependence of the cultural organizations on state subsidization has once again become evident. Newly planned government cuts are suddenly making this a very current topic. Recent plans for cutting in public budgets seem to be the coup de grace for both the *Nederlands Kamerkoor*, a choir specialized in chamber music and *The Muziekcentrum van de Omroep*. This holding of three orchestras and one choir is told to be cut out of all governmental support and on top of that, is planned to be shut down by the government. Again the cultural sector is astounded by the lack of motivation concerning content. The impact of these changes in governmental policy regarding the cultural sector as a whole and the symphony orchestras in particular, are yet to be seen.

3 Research area

The previous chapter provided an overview of the history of Dutch cultural policies and related developments in the classical music sector during the twentieth century. This chapter gives a short overview of the existing literature regarding cultural policy and subsidization and the cultural programming behaviour. These two chapters show the context of the problem statement and research question which will be outlined in chapter 4. The literature will be discussed more in depth throughout chapter 5. Earlier researches inter alia in Germany and the United States of America have studied the influence of the amount of subsidy on particular programming aspects, such as non-conformity. DiMaggio & Stenberg (Dimaggio & Stenberg, 1985) are leading in this field and their Nonconformity Index has been used by various scholars (Neligan, 2006; O'Hagan & Neligan, 2005; Pierce, 2000; Werck & Heyndels, 2007; Werck, Stultjes, & Heyndels, 2008). Concerning the relation of programming behaviour of cultural organizations and the subsidization they receive has been conducted quite some research. Most of it has also included the impact of programming choices on the consumption. In the Netherlands only historical research has been conducted on either the cultural policies or on the development of the musical sector. Prominent on this topic are Samama and Smithuijsen (Samama, 2006; Smithuijsen, 2007).

Subjoined figure (Figure 1) gives an overview of the existing literature regarding cultural policy and subsidization and the cultural programming behaviour. Prominence of the author is visualized by the size of the author's name. The focus of their work, either more on politics or more on the programming, is visualized by colour; blue representing a primary focus on politics and subsidization, and red representing a focus on the programming and the cultural organizations.

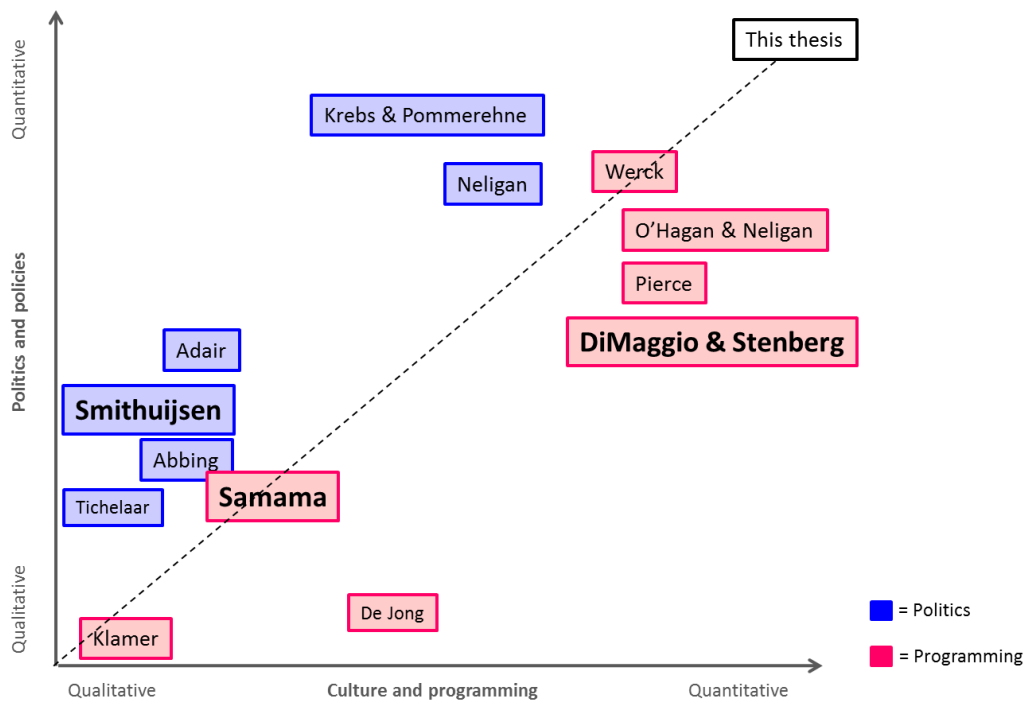


Figure 1 Literature overview

Although relatively many researchers have studied the relation of programming behaviour of cultural organizations and subsidization of culture, I have not been able to find a quantitative research studying the impact of the policies behind the subsidy allocation on the programming behaviour. For a better understanding of the relation of subsidization and programming behaviour it is important to also take the policies behind the actual subsidization into account. The subsidies allocated to cultural organizations do have conditions for those organizations receiving it, including conditions regarding programming behaviour desired by that government. When a new government is installed, this includes a change in policy behaviour and a shifting of the strings attached to receiving subsidies. But little is known regarding how the orchestras react to these policy changes.

This research is an attempt to acquire more of an understanding of how the policy changes influence the programming behaviour of the professional Dutch symphony orchestras, building a statistical model to measure the relation between governmental subsidies and regulations and programming behaviour. Hence, now the outline of the context of this research is given, in the following chapters, a research question will be formulated, followed by hypotheses based on the existing literature.

4 Problem definition

The previous chapters have outlined the context of this research. In this chapter the problem statement for this research and the research question are formulated.

4.1 Problem statement

The purpose of this thesis is not to study whether the performing arts should or should not be subsidized. Instead it focuses on the possible relation between the artistic programming decisions performing arts organizations make on one hand and the changes of government policies related to state subsidization on the other. Existing research has focused merely on the relation between the programming behaviour of performing arts organizations and the level of allocated state subsidies. So far, no research has been conducted to study the relation between the policies that lie behind the actual allocation of subsidies and the programming behaviour of the performing arts organizations that apply for and receive that state subsidy.

Another reason for this research is that besides the actual subsidization, the Ministry of Culture also spends a vast amount of tax-money on deciding their priorities and writing those down in the Cultuurnotas. And, although these Cultuurnotas are a notice or motivation on the allocation of the subsidies, it has so far not been proved that it actually influences the programming behaviour of the cultural organizations. Especially at this time that cut backs are being made by the government on, amongst many things, culture, this can be a worthwhile investigation on the use of government spending on culture; spending less money on bureaucratic proceedings, leaves more money for actual subsidization.

The research will focus on the possible influence of the governmental policies attached on the state subsidies that are being allocated by the Dutch government to performing arts organizations, and to the Dutch symphony orchestras in particular. It is an attempt to (1) fill this gap in the existing literature and (2) an attempt to find a method for (2a) studying and (2b) conducting a quantitative research on the relation between the governmental policies that are related to the actual allocation of state subsidies, and the programming behaviour of the performing arts organizations.

4.2 Research question

The research question for this thesis is:

To what extent do governmental interference, by subsidization and the attached policies influence the programming behaviour of the professional Dutch symphony orchestras in the Netherlands?

This question is formulated very globally as a public body or advisory office would formulate it. This enables the research to include all possible priorities that are postulated in the policy documents without presupposing any direction and helps to prevent the exclusion of any unexpected priorities.

In order to answering the research questions, both direct and indirect influences that can be expected, will be determined based on existing literature. The hypotheses derived from the existing literature will be noted throughout the next chapter.

5 Literature review

This chapter deals with existing literature and researches, of which an overview was presented in chapter 3, trying to perceive what influences and relations between government policies and subsidization and the programming behaviour of arts organizations can be expected based on their outcome. The influence of the programming behaviour by governmental policies is formulated in the research question in general terms. In order to be able to test this possible influence, the research question will be transcribed into several hypotheses concerning specific aspects of the programming behaviour on which influence can be expected based on the existing literature.

The historical overview on cultural policies shows that the political motivation of the subsidization of the arts concerns both the supply side of the arts, i.e. its content, as well as the demand side: the audience. Therefore the subsidization of the arts can be divided in three categories:

1. Financial: the government uses money in order to influence and stimulate certain behaviour.
2. Cultural content: for the arts the government provides direct subsidy to the supply side by subsidizing specific arts organizations, which enables them to continue creating arts with the same level of quality.
3. Audiences: indirect subsidies are provided for the demand side, by stimulating low prices, even below cost-price, to stimulate people to attend and consume the arts.

Because government policies concerning the subsidization of the arts have over the years always contained these three aspects, this study will also use this division.

5.1 Finance: the origin of income

With money one can buy many things, but some things don't have a price and cannot be purchased with money or expressed in monetary terms. Both the monetary and the non-monetary spheres have boundaries and there is an important borderline between the two (Walzer, 1985). Walzer distinguishes three different spheres: the monetary sphere, the political sphere and the relational sphere, the monetary sphere however tends to overlap with the other spheres (Walzer, 1985). These three spheres seem initially to be representing the same spheres as the spheres Klammer distinguishes. Klammer distinguishes the market sphere, the political sphere and the third sphere, the latter representing the societal sphere (Klammer, 2005). The monetary sphere Walzer mentions, corresponds to a large extent with Klammer's market sphere, however Klammer does not discern the monetary sphere as such because, although most monetary transactions are related to the market sphere, they occur in all spheres and it depends on the social relation of the recipient and dealer,

how the transaction should be interpreted (Klamer, 2005). Another important difference is that Klamer argues that it is the third sphere that is of the greatest importance of all three spheres, partly overlapping both other spheres because the characteristics of the third sphere are equal to social interaction and convention, which is intrinsic to all people and therefore these people bring this into the other spheres whenever they interact in the other spheres (Klamer, 2005). So, even though most will automatically think about the market sphere, money relates to all spheres. Within the monetary sphere it depends on the intention of the donor and the relation of the donor with the beneficiary to which kind of social sphere the monetary transaction belongs. It is the social relation that defines the nature of the monetary transaction (Zelizer, 1998). Endorsing both argumentations of Klamer and Zelizer is Bourdieu, saying that the value of currency is in fact based on trust and believe, which are characteristics of the third sphere. Believe in an exchange rate far exceeding the actual value of the object itself and trust in the object to maintain this value over time, individual relations and personal trust are a necessity to maintain this institutionally at a balanced state (Bourdieu, 1998).

Subsidizing the arts, implies a similar mutual trust of the government in the value of orchestras and thus in the quality of their performances, and of the orchestras in the government continuing with the subsidies on a certain level so they can plan ahead booking soloists and concert halls and employ musicians and programmers to maintain their level of musical quality. This trust goes beyond the logic of the government and may be found in the third sphere. One of the essential characteristics of the third sphere that relates to the complex relation of cultural organizations and their beneficiaries, such as sponsors, donors and those awarding grants is subjectivity. In contrast to both the market and the governmental-sphere, in the third sphere individuals act not anonymously. Klamer illustrates this with an example of a gift and the lottery. If you receive 1000 euros out of the lottery, you don't personally know the giver and you will feel free to spend it however you like. If you got 1000 euros from someone close to you, you will most probably feel obliged to spend it in a responsible way. Even if that person assures you, you can spend it as you please. The gift, which in each case is 1000 euros, is valued differently with the alteration of the giver (Klamer & Zuidhof, 1998). The same goes with financing the arts. Intuitively one would say there is a difference between a transaction that involves governmental-subsidy and a market transaction. Klamer and Zuidhof (Klamer & Zuidhof, 1998) base their paper on that intuition and try to show that this intuition is right. For the realization of arts the market and the government are not the only financers. Gifts are also a very important means for the realization of artistic work. An investigation of the gift intimates that the gift itself generates values that are distinct from the value being given (Klamer, 2003a). In the arts world, the source of money has a similar impact on the valuation of it, as it has in the example of a monetary

gift. But, in the arts world there is another important implication, because there it is not only the receiver who values the money differently depending on the source, the public and peers also make this distinction. And as long as people make these distinctions, governmental support will exist alongside with commercial sponsorship and gifts (Klamer, 2003b).

5.2 Finance: the amount of subsidies

Many of the cultural economic research conducted has been concerning the amount of subsidy cultural organizations in the United States of America receive related to the rate of conventionality of the program. DiMaggio and Stenberg (Dimaggio & Stenberg, 1985) developed the Conventuality Index as a measure of innovation in American non-profit theatres determining the degree of nonconformity. They realized that they could not measure innovativeness directly because even students of drama themselves do not agree about what constitutes innovation. Instead they decided to measure nonconformity: the extent to which a theatre's repertoire diverges from that of the other non-profit theatre (Dimaggio & Stenberg, 1985). With their research, they found meagre support on their hypothesis of a positive relation on conformity and institutionalization, being organizations with a large budget, high rate subscribed income and differentiated administration structures. Their most significant finding however was that both the size of the budget and the location have a major impact on the nonconformity of the theatres repertoire (Dimaggio & Stenberg, 1985).

The Conventuality Index of DiMaggio and Stenberg has been re-used by several other researchers. O'Hagan and Neligan (O'Hagan & Neligan, 2005) tested the non-conventuality of the repertoire related to the percentage of total income accounted for by public grants and found a positive relation indicating that the higher the state subsidization of a theatre, the more non-conventional its repertoire will be (O'Hagan & Neligan, 2005). Pierce (Pierce, 2000) studied the relationship between politics and the decision-making process of American opera companies. Consistent wit O'Hagan and Neligan, he also found a positive relationship on federal support and more controversial and risk taking programming; on the other hand, he also found that local government funding is negatively related to programming non-conventuality encouraging a more conventional programming behaviour. Other related findings of Pierce are that the large opera companies possess more programming autonomy than those with smaller budgets. Also private support influences their programming behaviour, corporate and private support encouraging conventuality and foundation support allows for greater autonomy.

Since this research will not only be focusing on the amount of subsidization and its impact on programming behaviour, but will merely focus on the strings attached to the subsidies and the

intentions of the policy-makers, the hypothesis on the impact of subsidy is formulated differently than in the previous studies that have been mentioned.

H1 Government subsidies influence the programming behaviour of the Dutch symphony orchestras: If a larger amount of subsidy is given to an orchestra, this will increase the dependence of the orchestra on the government. Similarly, orchestras with a lower percentage of subsidies react less to policy changes.

5.3 Content: subsidy conditions

Subsidization of the arts is not only a matter of the policies and requirements formulated for being considered for getting a subsidy, but also of the historical background on the governments' financial situation. During years of economic growth governments have more to spend on what they consider luxury goods such as culture. Also the history of the national convention on subsidization influences the matter. Krebs and Pommerehne (Krebs & Pommerehne, 1995) did not go into the political preferences, but found that the subsidies to public performing arts institutions are positively related to last period's subsidies and also to the government's financial resources. Also they found a negative relation to the institution's capacity utilization in the last period. Researching the influence of subsidies on programming behaviour, some researchers have also included analyses on the possible relation of political preferences and the rate of conventionality in the programming. Neligan found no significant evidence to support the hypothesis that conservative politicians tend to prefer more conventional repertoire (Neligan, 2006).

Studying the influence of subsidization on Flemish subsidized theatres, Werck (Werck et al., 2008) has been able to study the change in programmatic behaviour of the theatres after a change in the subsidy regime. During her observation period, the Flemish subsidy regime changed from a yearly allocation system to a system with an allocation period of four years. Werck found that the artistic programming behaviour changed to a more artistic risk taking programming substituting the financial risk which was before imposed by the yearly subsidy regime (Werck et al., 2008). After studying the impact on demand of both several output characteristics and of traditional determinants such as own price, income and the price of substitutes (Werck & Heyndels, 2007), Werck conducted a study on the impact of the change from a yearly allocated subsidy to the system of a four-yearly allocation of subsidy on the artistic choices. She found that changing the budgetary situation influenced both the amount and the nature of the output and also that the decrease in financial risk led to an increase of artistic risk-taking (Werck et al., 2008).

So far, no research has been conducted concerning the policy behind the subsidization, and the constraints that are consequently attached to it. But taking the constraints into account will give a considerable better insight on why subsidization influences the programming behaviour the way it does. Therefore this research takes it a step further than the existing research with hypothesis 2.

H2 Government emphasis is positively reflected in the musical content programmed by the Dutch symphony orchestras:

H2.1 If government emphasizes on more Dutch compositions, it is positively reflected in the number of Dutch compositions programmed in during a four-year term.

H2.2 If the government emphasizes on contemporary music, it will be positively reflected in the number of contemporary compositions programmed during a four-year term.

H2.3 If the government emphasizes on co-productions, either supportive or on an initiating level it will be positively reflected in the number of co-productions and co-operations.

5.4 Audience: existing and new audiences

One of the other findings in cultural economic research on the relation of subsidization and the programming behaviour of cultural organizations is the influence of dependency on subscription income. Neligan found for the German public theatre sector that dependency on subscription income has a positive effect on program conventionality explained by the aims to satisfy the tastes of their season ticket holders which are regarded as conservative (Neligan, 2006). This corresponds to the results of DiMaggio and Stenberg of a meagre support for a positive relation of a high rate of subscribed income and programming conformity (Dimaggio & Stenberg, 1985).

Both Pierce and DiMaggio and Stenberg found that the education level and the wealth of the local population seem to have a positive influence on the nonconformity of the programming of cultural organizations (Dimaggio & Stenberg, 1985; Pierce, 2000). Pierce concludes that communities consisting of more educated, liberal, sophisticated and wealthier individuals will allow for a greater program experimentation and risk-taking by the local companies (Pierce, 2000).

The studies mentioned above show a positive relation between a more conservative programming behaviour and the dependence on subscription income. O'Hagan & Neligan conclude that their findings indicate that the higher the state subsidization of a theatre, the more non-conventional its repertoire will be. However, they note that if this also applies in the case of private grants, it is the existence of income other than box-office that is the determining factor, rather than the state grants per se (O'Hagan & Neligan, 2005).

Two widespread assumptions are based on the findings that show a relation between the dependency of box-office income and conservative programming. The first assumption is that new audiences prefer less conservative programming and the second assumption is that many people do not attend the arts because they are not acquainted with them. This lack of knowledge creates a barrier as a result of which people do not attend the arts. More knowledge of culture will lower this barrier. Therefore policy makers striving for a broadening of the demand for arts, seek for solutions by the stimulation of changing the standard programming formats and in stimulating cultural education. The changes in programming format concern both the content of the program as the location and set up. An extra reason for governments to stimulate cultural education, are concerns regarding the composition of the audience, in specific the aging of the audience.

H3 Government emphasis on audiences is positively reflected in the locations and formats programmed by the Dutch symphony orchestras:

H3.1 If the government emphasizes on education, it is positively reflected in the number of projects and concerts with an educational purpose in during a four-year term.

H3.2 If the government emphasizes on the cultural range and on international exposure, this is positively reflected on the number of concerts organized abroad.

Most research has also looked into the way audiences influence the programming behaviour and used this as a control variable. Even though the significance of the results has varied, the results concerning audience characteristics and the results on the characteristics of the local population have been consistent in the researches of DiMaggio and Stenberg, O'Hagan, Pierce and Neligan and Neligan that have been mentioned in this literature review (Dimaggio & Stenberg, 1985; Neligan, 2006; O'Hagan & Neligan, 2005; Pierce, 2000) . The education level, the wealth of the local population and the amount of workers employed in professional or managerial occupation tend to have a positive influence on the nonconformity of the programming and the willingness to take risk. Also the population size appears to have an overall positive influence on the nonconformity. Also does larger populations allow for more theatres and therefore also allows for specialization. This research will not include audience characteristics or population characteristics as variables. Including these aspects would expand the scope of the research beyond the proportions of a master thesis. Moreover, significant differences are not to be expected since all Dutch symphony orchestras are resident in the major cities of the Netherlands, the education level throughout the mayor cities of the Netherlands can be expected to be reasonably similar, nor likely to have changed significantly over the last decade. The research design and all variables that will be included in the model will be discussed throughout the next chapter.

6 Methodology

Before testing the hypotheses that were derived from the literature throughout the previous chapter, the methodological aspects of the analysis are listed in this chapter. Firstly, the research design is discussed, followed by an overview of the hypotheses and a conceptual model showing the relations that will be analysed in order to test the hypotheses. Definitions and limitations of the dataset and the possibilities of the variables are discussed at the end of this chapter.

6.1 Research design

This research can be considered to be a pilot study. It is the first study attempting a quantitative approach on testing whether the governmental policies attached to subsidization have any influence on the programming behaviour of subsidized arts organizations.

The research strategy is a quantitative research, testing hypotheses. This research strategy is mainly chosen because this type of research has not yet been done on this subject, whereas it is a very promising method to clarify the relation of the programming behaviour and cultural subsidization, as described in the chapters 3 and 4.

This study focuses on two periods of cultural policies in the Netherlands, being 2001-2004 and 2005-2008 respectively and the programming behaviour of the professional Dutch symphony orchestras during 2001 to 2009. Although this approach of a multi-annual focus may suggest a longitudinal research design, it is not. For a longitudinal research design the development of the dependent variable over time is of interest for the study, whereas for this research the correlation of the governmental interference and the programming behaviour of the orchestras is of interest, irrespective the development of this correlation per orchestra over the years.

The research method chosen is a content analysis based on existing empirical material, being the Cultuurnotas to represent the governmental policies and the programs and annual reports of the orchestras.

Inferential statistics are conducted. Default to this method, consequently, the data of a sample enables for conclusions regarding the whole population of professional Dutch symphony orchestras. The representativeness, being the extent to which a study's results can be generalized to other situations or settings and the internal and external validity, are being discussed throughout this chapter and are also considered in chapter 9 and chapter 9.

The methods used for executing the analysis are parametric tests. Therefore all variables need to be ratio variables. T-tests and correlations are performed on the relations questioned in the hypotheses to find how if these relations are significant (p-values) and how strong these relations are (rho-values). The methods used are chosen because they can be used on large datasets, enabling to test if this research is a workable approach for large datasets and longer timeframes. All statements will be based on a level of 95% significance.

6.2 Hypotheses

In order to being able to study the relation of the programming of the orchestras and the cultural policies of the Dutch government, two groups of variables are included which are probable to be related and expected to be influencing the programming behaviour of the orchestras. The first group is the independent variables and consists of variables that are external to the orchestra organizations and are determined by government policies. The second group consists of the control variables and is internal to the orchestra organization; this group consists of characteristics of the orchestras representing its independence from the government. The dependent variables, the orchestra programming, and the control variables are both obtained from the individual orchestras.

It is good to note that in this chapter a different ranging of the variables is used. In this chapter the variables are split up according to the three columns of the conceptual model that is shown later in this chapter, starting with the Government policies and subsidies which are the independent variables that are shown in the left column. Secondly the dependent variables, the orchestras' programming, shown in the right column of the model are discussed. Thirdly the control variables, or Orchestra Independence, that are shown in the column in the middle of the model. Within this division all variables will be discussed divided in the same three aspects of the possible relation of government policies and the programming behaviour of the orchestras, as the hypotheses are grouped. The dependent variables are aspects of the Orchestra Programming and are displayed in the third column of the model.

In order to be able to test this relationship several hypotheses are formulated based on the existing literature and expectations derived from the outcomes of former research, as discussed in chapter 5. The hypotheses, that are extracted to test the influence of the government policy on the programming behaviour, reflect the distinction of the three categories of subsidization listed in chapter 5. The first hypothesis reflects the financial aspect, the second hypothesis relates to the cultural content and the third hypothesis concerns the audience. As a result, not only are there three

columns, three 'rows' can be identified as well in the conceptual framework at the end of this chapter.

6.2.1 Hypotheses overview

An overview of all hypotheses is listed below:

- H1 Government subsidies influence the programming behaviour of the Dutch symphony orchestras: If a larger amount of subsidy is given to an orchestra, this will increase the dependence of the orchestra on the government. Similarly, orchestras with a lower percentage of subsidies react less to policy changes.*
- H2 Government emphasis is positively reflected in the musical content programmed by the Dutch symphony orchestras:*
- H2.1 If government emphasizes on more Dutch compositions, it is positively reflected in the number of Dutch compositions programmed during a four-year term.*
- H2.2 If the government emphasizes on contemporary music, it will be positively reflected in the number of contemporary compositions programmed during a four-year term.*
- H2.3 If the government emphasizes on co-productions, either supportive or on an initiating level, it will be positively reflected in the number of co-productions and co-operations.*

An orchestra with a high rate of in residence performances is likely to be more conservative and will be less inclined to innovate in their program on aspects such as contemporary music and co-operations than orchestras with a low rate of in residence performances. This may influence the relation tested in H2.2 and H2.3.

- H3 Government emphasis on audiences is positively reflected in the locations and formats programmed by the Dutch symphony orchestras:*
- H3.1 If the government emphasizes on education, it is positively reflected in the number of projects and concerts with an educational purpose during a four-year term.*
- H3.2 If the government emphasizes on the cultural range and on international exposure, this is positively reflected on the number of concerts organized abroad).*

The initial audience numbers may influence the relation tested for in H3, because orchestras with high audience numbers, are likely to be less inclined to initiate activities that are believed to be audience generating, than orchestras with lower audience numbers.

6.2.2 Conceptual model

Figure 2 shows the conceptual model of how the hypotheses with all relations and variables will be tested.

The three columns represent the three types of variables; on the left the independent variables, being the government subsidy and the policies. In the middle the control variables are displayed, that are orchestra characteristics that possibly interfere in the influential power of the governmental subsidies and policies on the orchestra programming behaviour and reflect the independence of the orchestras. The column at the right displays the dependent variables; the programming aspects of the orchestras.

The three rows represent the three main hypotheses. The first row shows the relations questioned in Hypothesis 1, which is finance related. The second row represents the content related aspects of the programming behaviour that are named in Hypothesis 2. At the bottom row, the audience related aspects as formulated in Hypothesis 3 are displayed.

For a better understanding of the variable names as used for the analysis, one should note that the first letter of the variables represents the column of the conceptual model;

- Independent variables: Government (G)
- Control variables: Independence orchestra (I)
- Dependent variables: Orchestra characteristics (O)

The second letter represents the row of the conceptual model;

- H1: Finance related (F)
- H2: Content related (C)
- H3: Audience related (A)

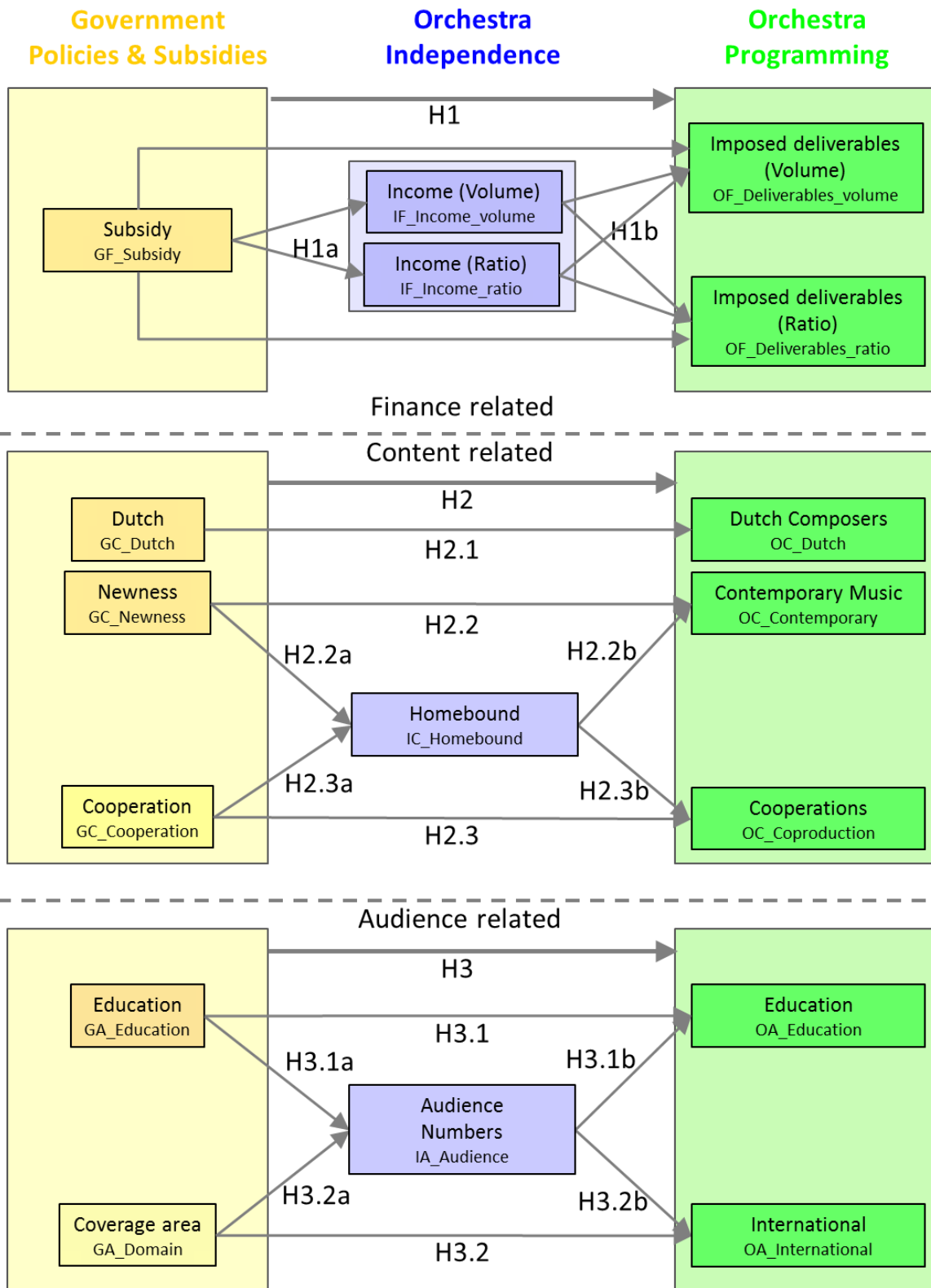


Figure 2 Conceptual model

6.3 Definitions and limitations

Of course one could go back in time to the establishment of the first symphonic orchestras in the Netherlands and include all political debates and paperwork from that point. Due to the restrictions of this thesis set by time and the availability of the data, this chapter only discusses a realistic and for this research realizable operationalization of the hypotheses, based on the orchestra archives of Het Gelders Orkest, the Residentie Orkest and the Rotterdams Philharmonisch Orkest and the Cultuurnotas of the period 2001-2004 and 2005-2008 for determining the governmental policies over those years.

6.3.1 Definition of contemporary music

Because of the complexity and the geographical variation of the developments in music, it is not practical to approach the musical evolutions of the twentieth century chronologically. During the interwar period the Netherlands, as the rest of Europe, was more isolated from other countries than before the war. Musically this resulted in a diverging of the artistic developments through Europe (Grout & Palisca, 1996). During that same period bold musical innovation occurred, but because of the level of isolation, innovations lead to very different styles of music in the different areas. The innovation of music already initiated several years earlier: already by 1907 Arnold Schoenberg broke with the customary system of tonality, and also there was already a tendency to suppress the goal-directed harmonic progression musical pieces were based on over more than two centuries (Grout & Palisca, 1996, p. 693).

Despite the diverging paths of musical developments, there was a significant gap between the new music and the responsiveness of the listeners. During this period several efforts were made to bridge this gap. In Germany and Russia however, the government placed censorship on new music, driving the artistic activity underground (Grout & Palisca, 1996); this also increased the isolation with other areas. But because certain movements such as expressionism, neo-classicism, twelve-tone composition and the basing of art music on folk materials crossed geographical boundaries, it can be more or less grouped chronologically as music of the twentieth century (Grout & Palisca, 1996). For this research the notion of music of the twentieth century has been used as a basis to mark music as contemporary. A line has been drawn roughly around 1911, the year Mahler passed away, because around this time many new styles originated.

All composers have been looked up in order to verify their main style of composing. For the analysis a distinction has been made on a composer's level. I am aware that some composers have made pieces

that are considered both contemporary as classical, but to make a distinction on the level of single compositions, the knowledge of a musicologist is required.

6.3.2 Definition of Dutch composers

Defined as Dutch Composers are all composers listed in either *Nederlandse muziek in de twintigste eeuw* (Samama, 2006) or in the *Algemene Muziekencyclopedie* (Corbet & Paaps, 1957; Robijns & Zijlstra, 1979). These two overviews joined together can be considered to give an exhaustive overview of all Dutch composers until 2006. To be sure, no new composers since 2006 are being overlooked; all other composers have been double checked on the Internet to look up their nationality.

6.3.3 Definition of imposed deliverables

The conceptual model as presented in paragraph 6.2.2 includes the dependent variables 'imposed deliverables' as volume and as ratio. These imposed deliverables represent all five programming aspects analysed in hypotheses 2 and 3. Their relation with the preferences has been defined in the policy documents. The variable Imposed Deliverables Volume represents the number of these performances and the variable Imposed Deliverables Ratio represents the percentage of all performances that comprises Imposed Deliverables.

These programming aspects are referred to as imposed deliverables because they correspond with the preferences of the government that are included in the model of this research and can therefore be expected to be enforced by these policies, rather than chosen for fully autonomously.

6.3.4 Limitation: synchronicity

This research pretends a synchronicity of the program of a year, the financial information of that year and the policy term of the same period. For example, the programming data of 2006 is compared with the financial data of 2006 and with the policy data of 2006. Arguments in favour of this approach are that it makes the research much more conductible and the moment the program is made final is unknown, as a result of which the status of the financial situation at the time of finalizing the program cannot be determined. However this approach does not take into account the inertia with which policies get through.

The whole process is a circle: the program is defined based on an estimated budget, including their anticipation on the amount of subsidy. Subsequently the subsidy is allocated based on the plans of the orchestras and the result of previous years. And the execution of the plans depends on the actual amount of subsidy received by the orchestras. Because of this process of interdependence

arguments can be named saying that the amount of subsidy depends on the program or that the program depends on the amount of subsidy. Presupposing synchronicity of the program and the financial information of that year may ignore the direction of the dependency, but enables for testing a possible relation of the two.

Another argumentation for synchronicity is that it can be argued that it takes time for an orchestra to implement the new directions of the government, which would suggest to comparing the policy data with the orchestra data of that year+1 – saying that the policies of term 2001-2004 should be compared with the orchestra data from 2002-2005. Similarly it could be argued that the government is slow implementing new policies and that therefore orchestras can anticipate on the new policies because they are made public before being implemented, suggesting that the policy data should be compared with the orchestra data of that year-1. Since arguments can be made for both, this research presupposes synchronicity for the orchestra data and the policy data.

6.3.5 Limitation: influence direction

A bilateral influence can be expected between cultural policies and the cultural field. Policies are based on the developments in society,,; cultural policies are as much based on general societal developments as on developments within the cultural field. An important tool used by the cultural field in trying to direct their influence is by lobbying.

This lobbying is also a way for the cultural field to keep in contact with the Ministry of Culture preventing to be caught by surprise over policy changes, and being able to anticipate on changes in the priorities and policies set by the government. This on-going dialogue between the cultural field and the government touches the phenomenon of synchronicity.

Although aware of this expected bilateral relation, this research presupposes an influence direction only from the policies on the programming behaviour. This is due to the fact that policies are also based on general societal developments which can bring about new policies that differ from what the cultural sector desires. Moreover, this can be considered the official direction of influence which is linked to the direction of the money flow; the government brings far more money to the cultural sector by subsidizing, than vice versa with taxes.

6.3.6 Limitation: role of audience size

It is important to note for this research that the audience size is not an objective as such. The emphasis the government puts on audiences is much more complex and goes far beyond the size alone. It also focuses on the composition of the audience, such as the reaching of more youngsters

and all social classes. However, the existing literature has shown that audience characteristics can influence the relation of the government policies and the programming behaviour of the orchestras. The size of the audience is the only aspect of all this which the dataset allows testing for and is therefore included as a control variable. The possible role of the audience size and audience characteristics will also be discussed in chapter 9.

6.3.7 Limitation: dataset

The purpose of this research was to study the influence of governmental policy changes on the behaviour of the professional Dutch symphony orchestras. However, the dataset collected for this research turned out not to be a fully representative selection. Firstly, it is not fully representative because the dataset consists of two orchestras' resident in the conurbation of Western Holland and one provincial orchestra, whereas the ratio of provincial orchestras versus urban orchestras is more or less evenly distributed.

Also the dataset is not a random sample of three orchestras; these were simply the only orchestras willing to cooperate.

However, the dataset is a representative selection on the main criteria, because all three are professional Dutch symphony orchestras. Therefore, the dataset can be considered to be good enough for being treated as a representative sample of the professional Dutch orchestras to do this research as a pilot study to test whether the relation of the state policies and the orchestras programming behaviour can be tested in a quantitative way.

In order to collect both the programming information and the required orchestra characteristics, all orchestras had to be approached individually since unlike most other countries where related researches have been conducted, no national database regarding the orchestras and their programming exists. The financial data and the data on the amount of concerts and corresponding audience numbers have been distilled from the annual reports. The programming data of some of the years of some orchestras was included in these annual reports, for other years separate overviews and brochures have been used to collect the programming data. Therefore both the approaching of the orchestras as the actual processing of the data proved to be too time consuming to include all Dutch professional symphony orchestras in this research. Three orchestras have been willing to cooperate and share their programming data, audience numbers and financial data from the period of 2001 to 2009.

The dataset is almost complete over the whole timeframe; only the programming data in 2009 from orchestra A is lacking and the data from orchestra C in 2001 is missing, because it was not included in the data provided by the orchestras. Also it is important to note that extra activities such as workshops, activities for the audience and educational activities in a different format than concerts are not included in this dataset because these are not mentioned in the program. This suggests that the orchestras themselves do not see these activities as a part of the program, but merely as side-activities. Het Gelders Orkest (HGO) mentions in the annual report extra educational and audience activities since 2005 and the Residentie Orkest (RO) mentions similarly extra activities since 2007. The Rotterdams Philharmonisch Orkest (RphO) on the other hand only mentions extra activities since 2009.

Only two Cultuurnotas, the four-year policy documents on cultural policy, could be used for the research. Due to time limitations only digital documents could be analysed, restricting the possible time-frame to two policy terms. Manual word counting of printed documents would have been too time-consuming.

6.4 Unit of observation

In the analysis on the influence of the policy changes of the Dutch government on the programming behaviour of the Dutch symphony orchestras, all variables will be under one unit of observation.

Unit of observation: *“The programming of an orchestra for a calendar year”*.

The unit per time and place is defined as followed:

Unit: Programming of a Dutch symphony orchestra, equals the pieces played

Time: Cultural year, running from September till August

A performance is defined as the performing of a composition, thus not as a full concert. This means that a concert that consists of three pieces is counted as three performances of a piece, so, more than 365 performances per year are possible.

Defining the unit of observation is chosen to use a calendar year rather than a cultural year which runs from September to August. This is mainly decided since all financial data is filed per calendar year and the four-year policy terms do not denominate a starting month.

The following paragraphs describe all possible variables related to the hypotheses that are formulated for this thesis. The final set of variables used for the analysis and the possibility of testing the hypotheses depends on the availability of the data.

6.5 Variables

This chapter discusses all possible dimensions and indicators of the variables wished for an optimal testing of the hypotheses formulated for this research.

For some variables, not only the used, but also alternative dimensions and indicators are discussed. A comprehensive overview of the used and alternative dimensions and indicators per variable can be found in Appendix A.

6.5.1 Independent variables: Policies

The independent variables of this study are the variables representing the Government Policies.

These variables are distilled from the Cultuurnotas of the relevant time periods.

In order to quantify the policy behaviour, the texts of the Cultuurnotas, quantitative text analysis using word-count has been conducted in order to get an objective overview of the main points of interest of the concerning four-year time period.

Both content related as audience related variables are distilled from the text of the policy documents. Content related terms will be terms like Dutch, Newness, and words containing 'new', but also words as Co-operation and Diversity. Audience related words, used to construct variables are Education, words having 'Young' such as Youngsters, but also words as Cultural Range and International exposure. Words relating to the same subject will possibly be joined to construct the independent variable. For example, Education and Youngsters both relate to the aim of the government to influence the composition of the audience. The exact words distilled from the policy documents that will be used are discussed in chapter 7.2.1.

Other ways to measure this would be to determine the size of the paragraph on the subject, for example measured by the number of text lines, or the number of times any of the keywords is mentioned in the preface or executive summary. In this case, only the simple word count is used, since it is the most direct and most efficient measure.

Another independent variable is the amount of subsidy administered by the government. This is administered in the variable Government Subsidy. This is a scale variable representing the amount of subsidy the government administers per orchestra per year, even though the subsidy is vowed per four year term, the exact amount is administered per year and fluctuates within these periods. This variable is constructed by a single indicator: the absolute amount of subsidy, measured in euro. Although amount of subsidy that will be administered to the orchestras is set per four years, the

exact amount varies per year and is also administered per year. The percentage of the orchestras' budget consisting of state subsidy is used as a control variable and will thus be discussed later.

It is important to note that the subsidy referred to in this research is only state subsidies. Subsidization by local or regional governments or subsidies from semi-independent funds is not included. Although state subsidization and other subsidies, especially subsidization by local and regional governments are often linked in the Netherlands, these other subsidizations are not directly linked to the policies set by the state.

6.5.2 Dependent variables: Orchestra programming

The dependent variable regarding the financial related aspect, are the Imposed Deliverables, representing the program elements the government has accentuated in the policy documents as a ratio of the total program of that year.

Within this programming, this study distinguishes three variables concerning the musical content programmed by the Dutch symphony orchestras. The first two variables regarding the content of the programming of the orchestras are the programming of Dutch compositions and the programming of contemporary music. These two variables are scale variables representing the performance of the orchestra of Dutch Composers and Contemporary Music respectively. These variables are both captured in one dimension which is the number of performances of either category, as a ratio of the total performances in that particular year.

Other possible indicators would include the number of distinct pieces or the number of distinct concerts during which a contemporary piece or a piece from a Dutch composer is performed.

The third variable regarding the content of the programming is Co-operations; this is a scale variable representing the involvement with other creative organizations' productions. The co-productions are recorded on concert level, not on the level of the individual piece or pieces within the concert. Co-operations can both be on a supporting level as an initiating level. One way to measure this would be by the number of distinct productions. Unfortunately, this is not available in the dataset. This variable therefore is measured as a single factor: the number of pieces performed at a concert that was fully or partly a coproduction with any other organization, expressed as a percentage of the total number of pieces performed during that year.

It should be noted that soloists are not considered to be an organization and are therefore not included. Even though most soloists are represented by an agent or impresario; these organizations only act upon their behalf; the soloists are not part of these organizations.

Two other elements of the programming that are possibly influenced by the government policies are audience related. The first of these variables is the undertaking of projects with educational purpose. This aspect is represented by the scale variable Education. This variable is captured in two dimensions; these are the educational projects and the youth concerts. Each of these dimensions is possibly constructed by one indicator, being the amount of projects as a percentage of the total amount of projects in that particular year. Concerts that are marked as a family concert or youth concert are also included in the counting of educational concerts. The educational nature of the concerts was not included in the programming data of all orchestras. This information had therefore to be distilled from the annual reports.

The other variable represents the international reputation of the orchestra. This variable could have been measured by the audience numbers outside the Netherlands. In this case, it has been captured in one dimension: the number of concerts outside the Netherlands as a percentage of the total number of concerts. Another possible dimension, for which the dataset unfortunately does not contain any data, would be the amount of international audience members at concerts performed in the Netherlands.

6.5.3 Control variables: Orchestra independence

As control variables, orchestra characteristics that allow them to act more independent from government policies will be included, because these may affect the influence government policies have on the programming behaviour. These characteristics are derived from the subjects mentioned in the different Cultuurnotas and from the previous studies discussed in the literature overview and are all scale variables determined per organization, varying per cultural year unlike the policies that vary every four year.

The financial situation of the orchestra may influence the extent to which an orchestra reacts to government policies. One possible indicator for financial independence would be the profit made in the previous year, or the equity capital of the orchestra. However, the data necessary for using these dimensions is not available for all orchestras included in this research. The control variable financial independence was therefore originally captured in a single variable comprising two dimensions: volume and ratio. However, not only was it not feasible to combine the two dimensions in one single variable, due to the finite scale of a ratio. And secondly, it also does not render justice to the different nature of the two dimensions: the volume of the orchestras' income displays the difference in independence between orchestras with a large budget and orchestras with small budgets. Besides, the ratio shows the independence as a percentage, irrespective of the difference in volume. For

example, if an orchestra has a total income of 60.000 euro and receives 20.000 euro state-subsidization, it is for 66% financially independent: $1-(20.000/60.000)= 0.66$. However, if another orchestra receives 40.000 euro subsidization, but has an income of 120.000 euro the amount of subsidy has doubled, but the ratio of independent income is the same (66%).

Two distinct variables are thus used for measuring hypothesis H1. The variable income volume is a scale variable and is captured in one dimension, being the total income, including subsidies, sponsoring and own income. The variable income ratio expresses the degree of financial independence from the national government, and is the amount of non-subsidy income as a percentage of the total income of year. This comprises all other sources of income besides state-subsidization.

The content related control variable, belonging to H2 and representing the possible conservatism of an orchestra, is constructed by a single indicator: the number of concerts performed in residence as a percentage of the total amount of concerts.

A possible influence on the relation tested for in H3, is the control variable Audience Numbers. This variable is captured in one dimension, possibly constructed by a single indicator: the absolute number of paying audience members. Non-paying audience members are not included since they are not part of the dataset.

The planning horizon which determines the extent to which orchestras fix their programming ahead and the influence of the programmer that is responsible for the programming are two aspects that are likely to also influence the programming behaviour of the orchestras. Unfortunately no data on these two aspects is available for this research.

Now that the variables have been discussed, the dataset available for this research will be discussed throughout the next chapter.

7 Dataset

So far, all chapters elaborated on the theoretical part of this thesis, starting with the literature and followed by the methodological aspects and possible variables. From this chapter on, it is about the practical part. This chapter discusses the actual dataset acquired for this research. Firstly, the data gathering is shortly explained, followed by the data used regarding the policies and the orchestra data. Also some univariate analyses are conducted to get a better understanding of the scope of the dataset before the hypotheses are tested.

7.1 Data gathering

In order to make the content of the Cultuurnotas quantifiable the online graphic reproduction device wordle.net has been used. Wordle.net is originally created by Jonathan Feinberg for IBM Research (Feinberg, 2009). The program works with a Query JavaScript library. This program is used on the integral core text of the Cultuurnotas in order to get a visual display of the hundred most frequently used words, leaving out common Dutch words as articles. These most frequently used words give a quantitative overview on the developments and shifting in emphasis of topics in the Dutch cultural policy. Based on these graphics, a regular word-count has been conducted to get a more precise idea on the word density.

For orchestra data, in order to be able to conduct a statistical adequate analysis, the data of three orchestras has been used. The data collected from the orchestras is extracted from the annual reports and the programming, partly included in the annual reports, partly documented on its own, from the period 2001-2009. Because the policy data was leading for this research, the timeframe has been set on the years, rather than the programming seasons that start in September.

7.2 Data description

7.2.1 Policy data

The motivation on cultural policy and the distribution of available subsidies is noted in the Cultuurnota, the official four-yearly policy document on cultural policies. Therefore these documents are used to distil the priorities of the cultural policies in the period under investigation in this research.

Based on the assumption that the words that are used most are of more importance and that those concepts are a reflection of the meaning and focus of the actual text, the visual graphs, constructed by Wordle are used to determine the key concepts of the Cultuurnotas. Distilling the points of

interest of the cultural policies, the integral text of the Cultuurnotas is analysed. Using the integral text, rather than only the section on performing arts has allowed for a better overview of the focus of the cultural policies it reflects. Also the paragraph on performing arts is on all performing arts, not only the orchestras, so using only this part of the Cultuurnota would not give an adequate view on the policies regarding orchestras. Also some general policies, specific to the overall cultural policies affecting the orchestras are not mentioned in the paragraph on performing arts and would be missed by using only that specific paragraph.

Furthermore, there are three terms that are not used as variables for this research, but are relevant words regarding the subject. Those are Orchestra, Programming and Quality. In the Cultuurnotas 2001-2004 and 2005-2008 the word orchestra is used 26 and 27 times respectively. The term programming is not mentioned as often in Cultuurnota 2005-2008; only 14 times, compared to 27 times in Cultuurnota 2001-2004.

However this research does not take the quality of the orchestras into account, it is worthwhile to mention that Quality was an important aspect in the Cultuurnota 2001-2004 relying on the frequent use of the term, whereas it was mentioned not even half as often in Cultuurnota 2005-2008.

The following visual graphs (Figure 3) display the word density of the Cultuurnota 2001-2004 and 2005-2008 respectively.



Figure 3 Graph of Cultuurnota 2001-2004 (left) and 2005-2008 (right) created with Wordle

The total amount of words of Cultuurnota 2001-2004 is 25.676 words, and the Cultuurnota 2005-2008 consists of 18.643 words.

Some of the frequent words are inherent to the documents and do not point at any specific topic related to orchestra programming, so these words are left out of this research. These words are;

Raad (the advisory board), culturele and cultureel (cultural), miljoen and mln (million), subsidie (subsidy), fonds (fund), advies (advice) and instellingen (organizations). Wordle.net has already corrected for common frequently used Dutch words such as articles.

Both Cultuurnotas have some words that pop out in these graphs because of their frequent use. The words of Cultuurnota 2001-2004 that pop out are: Co-operation (samenwerking), Dutch (Nederlands(e)), Audience (publiek), Education (onderwijs/educatie), Quality (kwaliteit), Audience reach (publieksbereik), New (nieuw(e)), Youngsters (jongeren), Diversity (diversiteit), and the Range of culture (cultuurbereik).

Words that pop out in the other Cultuurnota are: Audience (publiek), Intercultural (interculturele), Co-operation (samenwerking), International (international), Dutch (Nederlands(e)), Diversity (diversiteit), Education (educatie/onderwijs), Activities (activiteiten), Supporting (ondersteunend). Some of the words and the concepts they represent differ from the other Cultuurnota.

All these keywords will be used to analyse the relation of cultural policy changes and the programming behaviour of the Dutch symphony orchestras. Related words will be joined into construct variable as shown and explained in Table 1, Table 2 subsequently shows the frequency of the use of the keywords distilled from the Cultuurnotas per Cultuurnota.

Variable	Words from nota	Notice
Dutch	Dutch	Although the term Dutch does not always refer to music, it does refer to the importance of national heritage and the national consciousness at that time
Newness	New	Newness may not only refer to contemporary music, it still is a good indicator of the importance attached to current developments and recent creations
Cooperation	Cooperation Supporting Intercultural Diversity	These four terms all imply a form of cooperation. Diversity does not imply cooperation per se, it can also be sought within the orchestra repertoire, but it does invite orchestras to search beyond that.
Education	Education Activities Youngsters Audience	These four terms are all related to education. Most education projects are referred to as special activities and dedicated to youths. Emphasis on education also implies an emphasis on the demand side, i.e. the audience; therefore audience is included in this construct variable.
Coverage area	International Cultural reach	Both these terms are related to the coverage area of the orchestras. International refers to the emphasis on tours and international exposure, cultural reach is about the reach of the orchestra within the Netherlands, either national or more regional.

Table 1 Overview and clarification of policy variables

Variable	Words from nota	Frequency 2001-2004	Frequency 2005-2008
Dutch	Dutch	66	46
Newness	New	126	81
Cooperation	Cooperation	63	20
	Supporting	25	64
	Intercultural	4	20
	Diversity	26	35
Education	(Cultural) Education	108	51
	Activities	45	31
	Youngsters	26	5
	Audience	108	47
Internationality	International	34	41
	Culture range/reach	18	7
	(cultuurbereik)		48

Table 2 Frequency of keywords

7.2.2 Orchestra data

In order to be able to conduct a statistical adequate analysis the data of three orchestras has been used. These orchestras are Het Gelders Orkest (HGO), the Residentie Orkest (RO) and Het Rotterdams Philharmonisch Orkest (RphO). From now, the abbreviations will be used to referring to the orchestras.

The data collected from the orchestras is extracted from the annual reports and the programming, partly included in the annual reports, partly documented on its own, from the period 2001-2008. Because the policy data was leading for this research, the timeframe has been set on the years, rather than the programming seasons that start in September. It should be noted that as a result the programming data starts with the second half of the programming season 2000-2001 and ends with the first half of the season 2008-2009. The HGO and the RphO both miss one and a half year of data due to absent programs of season 2008-2009, 2009-2010 and 2000-2001, 2001-2002 respectively. The years, of which the data is partly missing, the numbers have been multiplied for the missing months as an estimation of the total result of that particular year. This is done for the HGO in 2008 and for the RphO in 2002.

Gathering the data from all individual orchestras has proved to be very time consuming. A first approach to all eleven symphony orchestras in the Netherlands without introduction by a mutual acquaintance resulted in only one orchestra that was willing to cooperate for this research. So a different way of approaching had to be sought and asking relatives and friends finally lead to the consent of two other orchestras to cooperate as well. As noted earlier, this is not a fully representative sample for the professional Dutch symphony orchestras, but it is considered to be

sufficient for testing whether this new quantitative approach is a good method for researching the relation of the orchestra programming behaviour and the changing in government policies.

Entering all acquired information into a dataset took about a workweek per orchestra. Especially interpreting the information of the annual reports and equating the differences of denomination proved to be time consuming. For example the breaking down of educational concerts, educational activities, special projects and extra activities was different for each orchestra, and part of it had to be redistributed and new categories had to be made in the database in order to being able to compare the related audience numbers. Subsequent table provides an overview of the variables that could be obtained from the dataset.

Variable	Notice
Dutch	Performance of a piece of a Dutch composer
Contemporary	Performance of a contemporary composition
Coproduction	Performance of a piece during a concert at which a coproduction is executed
Education	Performance of a piece during a concert with an educational purpose
International	Performance of a piece at a location outside the Netherlands
Imposed deliverables volume	The number of performances containing one of the aspects captured in the variables above
Imposed deliverables ratio	The percentage of performances containing one of the aspects captured in the other variables

Table 3 Overview and clarification of orchestra variables

The dataset of the programming over nine years for these three orchestras consists of a total of 7273 musical pieces that were performed. Note that these are not all different pieces; pieces that were performed three times are counted as three pieces performed. As shown in Table 4 all orchestras performed roughly the same number of pieces: The HGO performed 2218 pieces during this period of time, the RO performed 2439 and the RphO 2465. Interestingly, only the programming data of the RO is complete in the dataset, meaning that for the RO one more year is included compared to the other orchestras. However, the RO did not perform the most pieces.

Performances per orchestra			
	HGO	RO	RphO
Minimum	267	201	224
Maximum	337	360	395
Average	296	271	308
St.dev.	26	46	58
Total	2369	2439	2465

Table 4 Performances per orchestra

The data on education is retrieved from the programming-data. Only for the RphO this is retrieved from the annual reports, because it was not specified in the programs that were put at disposal for this research.

Descriptive statistics are conducted to get a better understanding of the scope of the dataset. Firstly some general matters are mediated over all orchestras to see the averages, followed by some comparisons and trends. All tables used to creating the graphs can be found in Appendix B. The horizontal axis of the figures 7 to 11 represents the number of observations. The number of observations is 27 (3 orchestras*9 years), but since one year of information is missing for two of the orchestras the total number of observations is 27-2 =25.

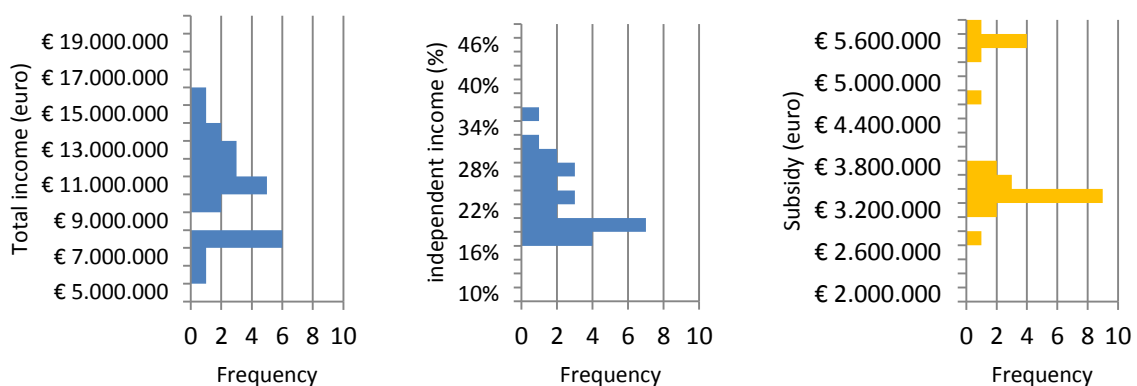


Figure 4 Income volume (left) and ratio of independent income (middle) and the amount of allocated subsidy (right)

The first three graphs in Figure 4 show some interesting details about the income and division of subsidy of the orchestras.

The graph at the left shows for all 25 observations on the income per orchestra per year an income volume between 6 million euro and 16 million euro. The average income is 10 million euro per year. Despite a gap at 9 million euro, the income volume seems a normally distributed variable. This prerequisite for most statistical tests will be tested in chapter 8. The average can also be found in Appendix B showing all tables used to create the graphs.

The third graph, representing the amount of allocated subsidy, shows an average of 4 million euro of subsidy per year with a minimum of 2.8 million and a maximum of 5.8 million. Interestingly a gap can be seen between 4 million and 5.2 million euro's with only one observation in between at 4.8 million euro's. This is because one of the orchestras receives far more subsidy than the other two orchestras, as can be seen in the corresponding table in Appendix B.

The middle graph displays the average ratio of independent income, meaning income other than state subsidy. This varies from 18% to 36 % with an average of only 23%. Based on these graphs, an independent orchestra would be an orchestra with more than 30% income other than subsidy.

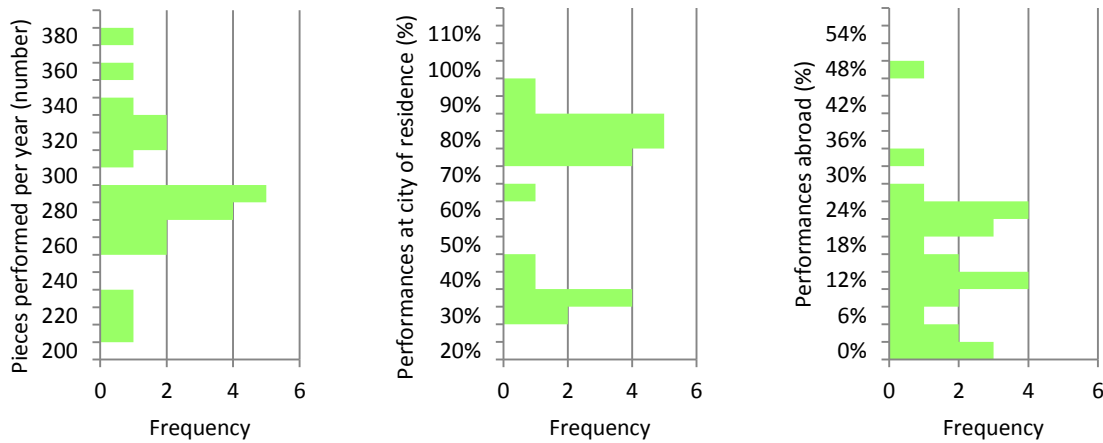


Figure 5 Pieces performed per year (left)
 Figure 6 Performances at city of residence (middle)
 Figure 7 Performances abroad (right)

The graph at the left (Figure 5) shows the number of pieces performed per orchestra per year, with most years between 270 and 300 pieces performed. The observation of the fewest pieces performed is 210 performances by an orchestra in a year and the most pieces performed by an orchestra in a year are 380. A ‘busy’ year would be a year with more than 350 performances and a ‘calm’ year with less than 250 performances.

Figure 6, the one in the middle, representing the variable homebound, shows the percentage of pieces performed in the city of residence. Interestingly a gap can be seen between 50% and 75% with only one observation in between at 65%. Eight observations are under ratio of 50% performances executed in residence and the other seventeen above 65%. The corresponding table shows that this gap is due to the fact that one orchestra performs less in its city of residence than the other two orchestras. Based on this graph the flexibility of an orchestra can be estimated at a ratio of less than 50% of all performances being performed in residence.

The ratio of performances abroad, displayed in the right in Figure 7 shows an average of 15%. However, the maximum observation is a peak of one single observation of no less than 48%; all other observations go up to no more than 33%. The maximum observation represents the RphO in 2006, the reason for this peak value could not be found.

The ratio of performances with at least one element to the liking of the government is displayed in Figure 8 and lies between 38 and 65% with an average of 49%. Anticipating on the testing of hypothesis 1, it will be interesting to see whether these ratios will prove to be depending on the degree of reliance on subsidy income. Hypothesis 1 will be tested in chapter 8 to see whether a significant relation can be found between the amounts of subsidy received and the ratio of performances that meet at least one of the priorities distilled from the Cultuurnotas.

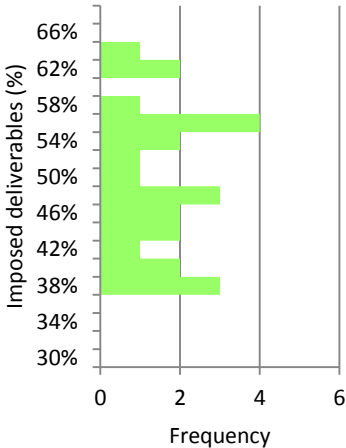


Figure 8 Deliverables ratio

So far, the data has only been interpreted in general terms, without comparing the orchestras. Subsequent graphs and table show distinct observations in trends and comparisons of the different orchestras.

<i>Turnover per term per orchestra</i>		
	2001-2004	2005-2008
HGO	€ 27.024.762,00	€ 29.950.389,00
RO	€ 39.849.000,00	€ 42.165.000,00
RphO	€ 36.861.991,00	€ 54.811.119,00

Table 5 Turnover per term per orchestra

The overview on the turnover per term per orchestra in Table 5 discloses that all orchestras have a greater turnover in the period of 2005-2008. The HGO has both terms by far the least turnover, whilst receiving the most subsidies. Note that the turnover data of 2001 is lacking for the RphO and this is very likely to be the reason the RO seems to be having the greatest turnover during the first term.

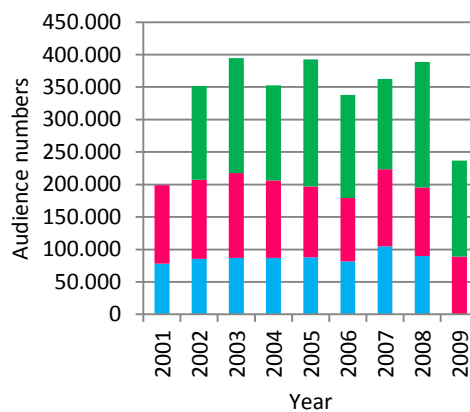
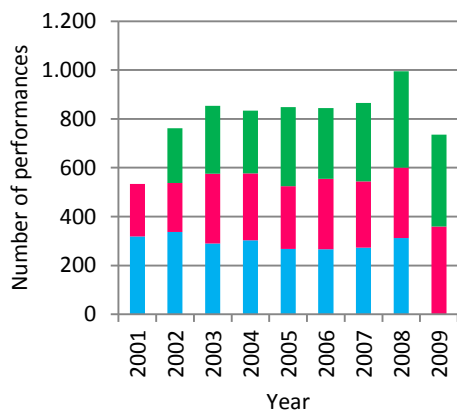


Figure 9 Number of performances (left)
 Figure 10 Audience numbers (right)

Figure 9 shows that the number of performances is similar for all orchestras. But where a slight increase of performances can be seen for the RO and an even larger growth shows for the RphO, the HGO shows a decrease until 2006 and a slight increase over 2007 and 2008.

The audience numbers do not show a clear trend in Figure 10. But the graph does show clearly that the RphO has the largest audience. The audience size of the RO seems to be staying behind compared to the increasing amount of performances, so although the number of performances increases, the size of the audience per performance appears to be decreasing slightly.

A clear trend can be seen Figure 11 of an apparent indexation of the allocated subsidy for each period. One distinct observation is that the HGO receives by far the largest amount of subsidy albeit it has the least performances and also the smallest audience size. The RphO appears to be the most independent orchestra. Although the amount of subsidy is similar to the RO, the size of the RphO's audience is unmistakably larger. Some of the difference in audience size can be explained by the difference in capacity of the concert-halls in the cities of residence. Musis Sacrum in Arnhem has a capacity of roughly 880 seats (HGO), the capacity of the Anton Philipszaal in The Hague is more or less 1.890 (RO) and De Doelen in Rotterdam has about 2.100 seats (RphO). However, having a larger concert-hall at one's disposal does not yet fill it with audience members.

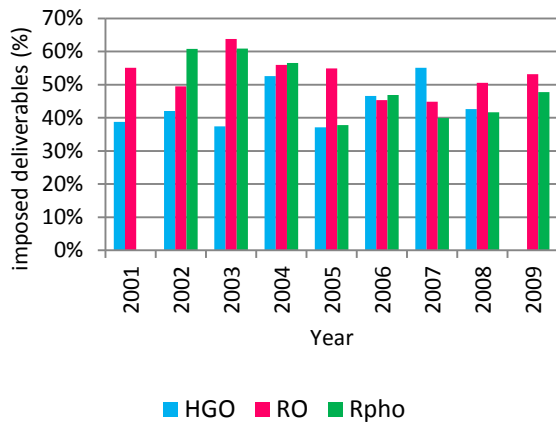
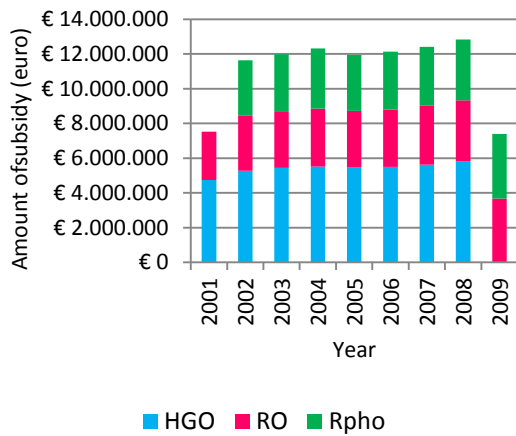


Figure 11 Amount of subsidy (left)

Figure 12 Imposed deliverables ratio (right)

Figure 12 shows the ratio of performances per orchestra consisting of at least one of the policy priorities. Interestingly, the HGO, which is most depending on subsidies, does not stand out in this graph; only in 2007 the deliverables ratio of the HGO was the highest.

The amount of subsidy the HGO receives per performance conceding to the liking of the government really stands out in Figure 13, with a summit of almost €55.000,- per performance conceding to the liking of the government in 2005. Interestingly, the RO showed a far higher amount of subsidy per performance compared to the RphO in 2002, but these two orchestras show very similar results since.

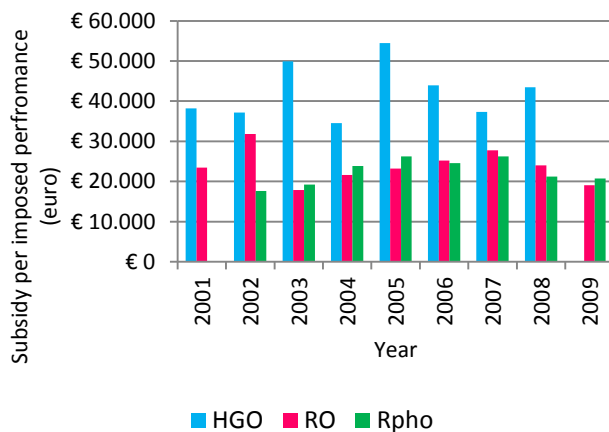
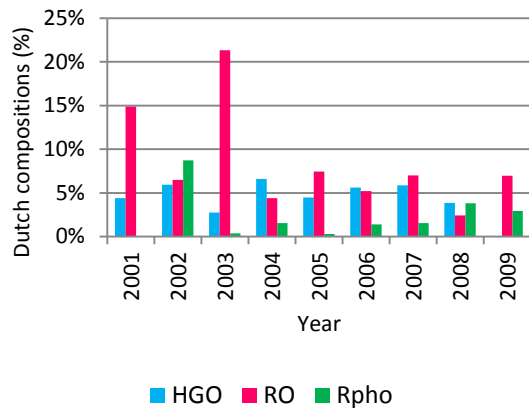


Figure 13 Subsidy per imposed performance

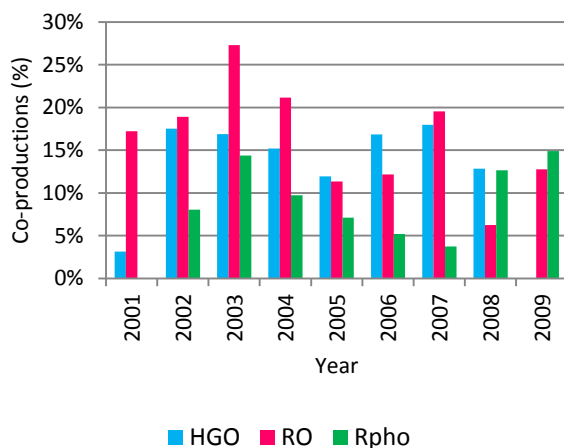
Regarding the dependent variables on the programming content, being Dutch composers, contemporary music and co-operations, many differences can be seen, but without statistical tests little can be concluded. The orchestras show on all three matters very different patterns.



<i>Dutch</i>	<i>01-04</i>	<i>05-08</i>
Dutch	66	46

Figure 14 Performances of Dutch compositions (left) and the emphasis on Dutch in the Cultuurnotas (right)

The graph of Figure 14 on Dutch composers shows two peaks performed by the RO are seen in 2001 and 2003. Neither in the annual reports of these years, nor in other publications, was found an explanation for these peaks. Also the RphO shows a slight peak of performing Dutch composers in 2002, which may be due to their Rotterdam Music Festival that year.

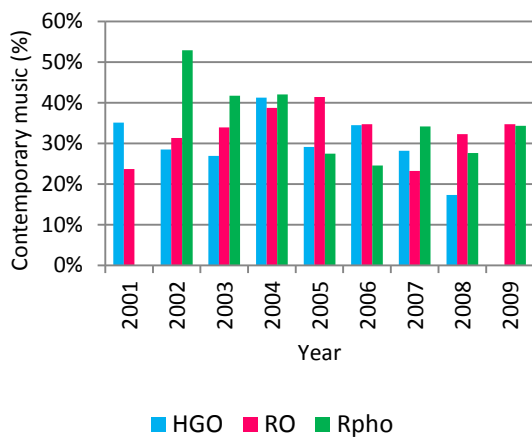


<i>Cooperation</i>	<i>01-04</i>	<i>05-08</i>
Cooperation	63	20
Supporting	25	64
Intercultural	4	20
Diversity	26	35
TOTAL	118	139

Figure 15 Performances with co-productions (left) and the emphasis on cooperation in the Cultuurnotas (right)

A growing trend was to be expected for the amount of co-productions since the increasing density of related terms in the Cultuurnotas. Nevertheless, in Figure 15 the RphO shows a clear trend of a

decline of co-productions from 2003 until 2007 and a sudden rise in the last two years. The HGO is relatively stable, whereas the RO shows highs and lows without a clear trend.



<i>Newness</i>	<i>01-04</i>	<i>05-08</i>
New	126	81

Figure 16 Performances of contemporary music (left) and the emphasis on newness in the Cultuurnotas (right)

For contemporary music a slight decline can be seen which was to be expected based on the decrease of emphasis on newness in the Cultuurnotas. In Figure 16 the RphO shows a peak of performances of contemporary pieces in 2002. No specific reason could be found to explain this peak.

These last three graphs concerning the content of the performances are preceding the testing of hypothesis 2 in the following chapter. In that chapter hypothesis 2 will be tested to find out whether any of the above findings are statistically significant.

8 Analysis

The previous chapter described the characteristics of the dataset that is used to test the hypotheses in this chapter. As displayed in the conceptual model in chapter 6.2.2, each row in the model represents one of the main hypotheses and contains one or more distinct bivariate relations that are suggested by the hypotheses. Hence, this chapter will start with testing the individual hypotheses by conducting bivariate analyses. Consequently, a multivariate model is used to combine all significant outcomes, in order to answer the main research question as formulated in chapter 4.2

As discussed in chapter 6.1, all variables are scale variables and thus a Pearson's correlation will be conducted to measure the cohesion of the variables as questioned in the hypotheses.

Since the dataset contains only two periods for the policy data, a T-test can be conducted to test for a significant difference between these two terms. The intensity of the correlations cannot be measured using a T-test. Therefore a Pearson's correlation test will be conducted as well. For analysing the influence of interfering variables and the autonomy of relations, partial correlations need to be computed.

The orchestra data collected covers the years 2001-2009, this is one extra year compared to the policy data which entails the data of 2001-2008. Since the number of observations is relatively small, this extra year is added to the data concerning the second policy period. The main argument in favor is that, regardless the first policy documents discussing 2009-2012 which is dated in June 2007 (Ministerie van Onderwijs, 2011a), the final and official policy document for the period 2009-2012 is dated 16 September 2008 (Ministerie van Onderwijs, 2011b). This is after the starting of the cultural season 2008-2009. Hence, it is reasonable assuming that the program of that season as for the rest of 2009 was already set at that time.

For the orchestras essential aspects could have changed during the time frame of this research. Possible changes are a new conductor or a new programmer. These changes can possibly influence the programming behaviour greatly. Hence, although observations in two different periods are linked by orchestra, the observations have been treated as independent observations. Therefore independent sample-T-tests have been conducted.

A statistical significance of 95% is chosen for all tests unless it is explicitly said to be different. The syntax of all statistical analyses can be found in Appendix C.

8.1 Preliminary checks

Before starting to analyse the hypotheses, firstly a check for the normality of the dependent and independent variables is executed. This is done to check the validity of the coming outcomes, because the tests executed to analyse the hypotheses assume normality. For the dependent variables it is most important to be normally distributed since this is a premise for the coming analyses. The distribution of the sufficiently normally distributed variable deliverables ratio is shown in Figure 17:

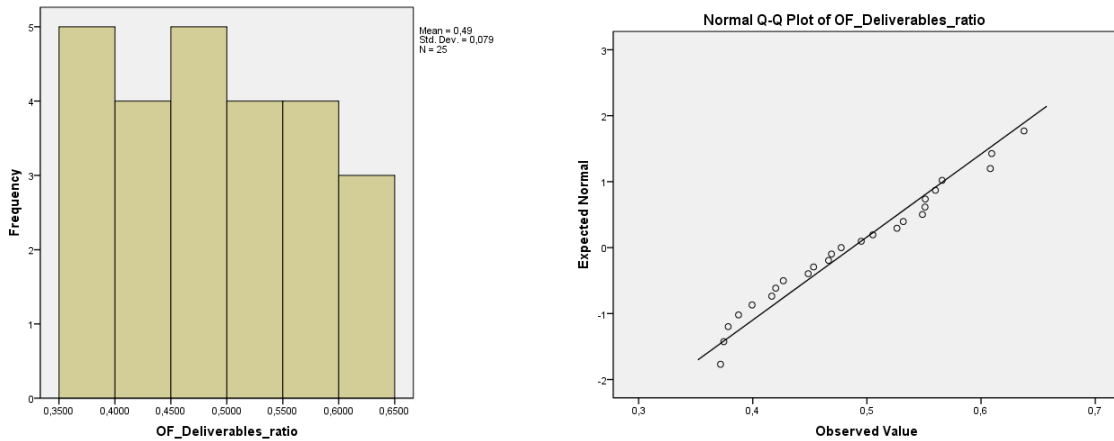


Figure 17 Normally distributed variable Deliverables ratio

To check for normality, two non-parametric tests are used; Kolmogorov-Smirnov test for normality and Shapiro-Wilk test for normality of small samples. Most interesting are the outcomes of the Shapiro-Wilk test, since the available dataset is indeed a small sample.

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
GF_Subsidy	,290	25	,000	,771	25	,000
IF_Income_volume	,150	25	,151	,952	25	,284
IF_Income_ratio	,184	25	,028	,915	25	,040
IF_Performances	,148	25	,165	,970	25	,636
OF_Deliverables_ratio	,100	25	,200 [†]	,954	25	,308
OC_All	,123	25	,200 [†]	,989	25	,629
OA_All	,140	25	,200 [†]	,921	25	,054

a. Lilliefors Significance Correction

†. This is a lower bound of the true significance.

Table 6 Output of normality tests

The outcome of the Shapiro-Wilk test shown in Table 6 shows that the three dependent variables OF_Deliverables_ratio, OC_All and OA_All fall within the scope of the statistical significance of 95% and can be therefore considered as normally distributed variables.

Note that the variable IF_Performances represents the total number of pieces performed per year. This variable does not show in the other models, but is used to compute the percentages of the orchestra variables.

Subsequent graphs (Figure 18) illustrate that the independent variables Subsidy and intermediate variable Income_ratio are not sufficiently normally distributed: their distribution differs significantly from the normal distribution ($p=0.000$ and 0.040) as proven by the Shapiro-Wilk test.

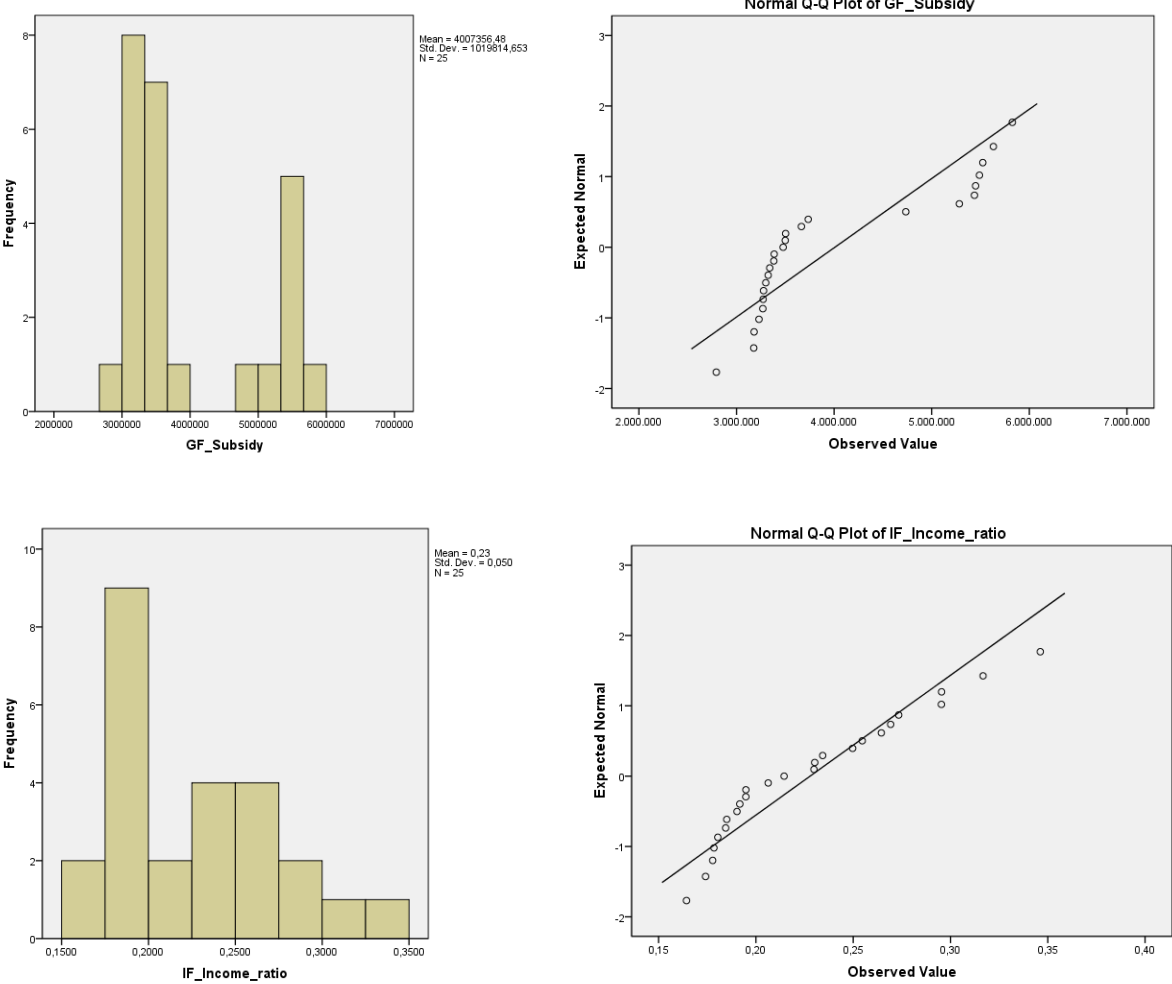


Figure 18 Not normally distributed variables Subsidy (top) and Income ratio (bottom)

8.2 Hypothesis 1

As shown in Figure 19, hypothesis 1 questions the relation of the amount of subsidy and the deliverables of the orchestras. The latter consists of two dimensions: volume and ratio. Hence, hypothesis 1 will be tested twice by conducting separate analyses for the correlation between the independent variable subsidy and the (1) dependent variable imposed deliverables_volume and (2) deliverables_ratio.

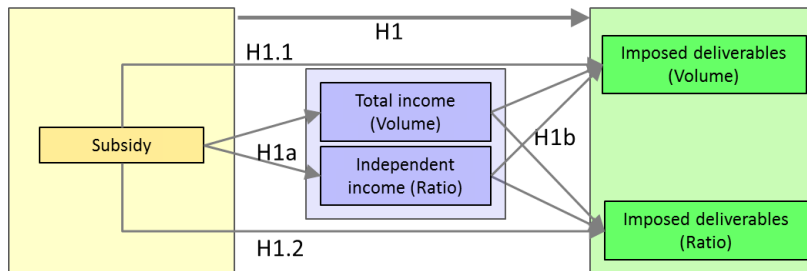


Figure 19 Conceptual model of hypothesis 1

Both relations are possibly influenced by intermediate variable income. The variable income again has two dimensions: the total volume and the independent income as a ratio.

Before testing hypothesis 1, the influence of the covariate income will be analysed. This is shown as H1a and H1b in the above figure (Figure 19). The two dimensions of this covariate represent two very different aspects of the income of the orchestras as discussed in chapter 6.5.3.

Subsequent scatter plot (Figure 20) visualizes the difference of the two dimensions. Had both dimensions represented the same aspect, the scatter plot would have shown a straight line.

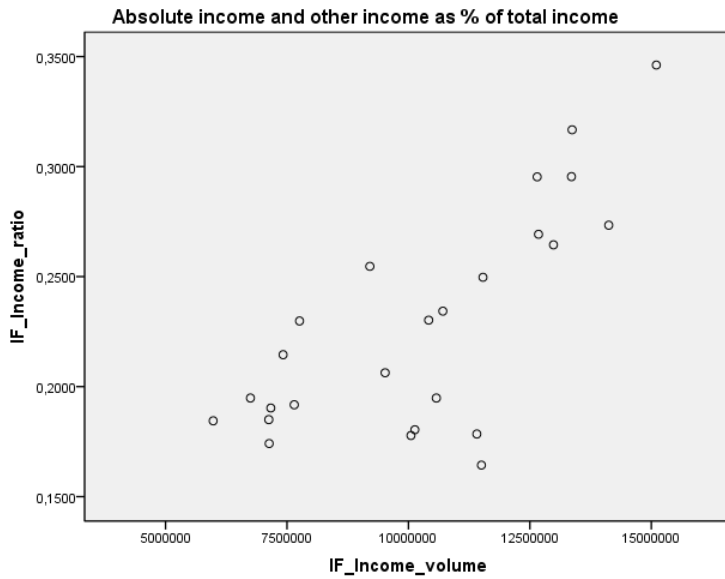


Figure 20 Scatter plot showing the relation of the total income volume and the independent income as ratio

A Pearson's correlation has been conducted in order to test the relation between the income variables; covariate income volume and covariate income ratio. Pearson's correlation shows a relation that is significant ($p=0.001$), but moderate ($\rho = 0.739$), displayed in Table 7.

Correlations		IF Income volume	IF Income ratio
IF_Income_volume	Pearson Correlation	1	,739**
	Sig. (2-tailed)		,000
	N	25	25
IF_Income_ratio	Pearson Correlation	,739**	1
	Sig. (2-tailed)	,000	
	N	25	25

** . Correlation is significant at the 0.01 level (2-tailed).

Table 7 Output Pearson's correlation on income volume and income ratio

Although the correlation is significant ($p=0.001$) the relation is not very strong ($\rho= 0.739$). The p-value represents that the sample consists of sufficient observations to state that the correlation found (ρ) is not due to coincidental sampling.

Just as done for the intermediate variable income, the correlation of the two dimensions of the dependent variable imposed deliverables can be assessed. The scatter plot (Figure 21) shows that the two dimensions represent different aspects of the variable deliverables.

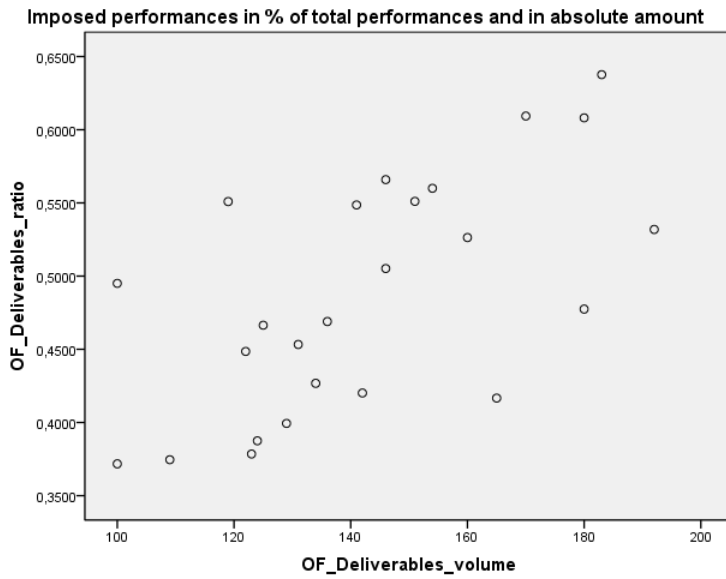


Figure 21 Scatter plot visualizing the relation of Deliverables ratio and deliverables volume

A Pearson’s correlation is conducted on the volume of the imposed deliverables and the ratio of the imposed deliverables, to test whether they represent similar characteristics or whether they need to be treated as two variables (Table 8). The outcome shows a weak but significant result ($\rho = 0.627$, $p=0.001$). Therefore the volume and ratio need to be treated as two distinctive variables and H1 will be tested separately for the relation of the amount of subsidy on the deliverables volume (H1.1) and on the deliverables ratio (H1.2).

Correlations^a

		OF_Deliverables_ volume	OF_Deliverables_ _ratio
OF_Deliverables_volume	Pearson Correlation	1	,627**
	Sig. (2-tailed)		,001
OF_Deliverables_ratio	Pearson Correlation	,627**	1
	Sig. (2-tailed)	,001	

** . Correlation is significant at the 0.01 level (2-tailed).
a. Listwise N=25

Table 8 Output of Pearson correlation on the variables Deliverables ratio and Deliverables volume

Hypothesis H1a and H1b are therefore both tested twice, using the different dimensions of the variable Income, the dependent variable for this hypothesis.

8.2.1 H1a: Subsidy and income

A parametric test is conducted to test the relation of the absolute amount of subsidy on the absolute income and the independent income ratio, representing all other income than state subsidy, as visualized in Figure 22.

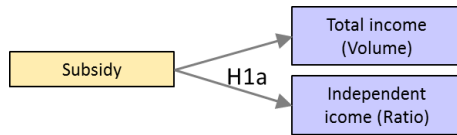


Figure 22 Conceptual model of H1a

The output of Pearson’s correlation displayed in Table 9 shows a negative and significant relation between the amount of subsidy and the absolute volume of the total income ($\rho = -0.743$, $p=0.000$), this is highlighted in **dark green** in Table 9. So, if the total income increases, the amount of subsidy does not increase accordingly.

Also the relation of the amount of subsidy on the independent income as ratio shows a negative and significant relation ($\rho = -0.435$, $p=0.030$), highlighted in **light green**. So, orchestras with a greater percentage of own income receive a smaller amount of subsidy. However, this second relation is not as strong as the relation of the amount of subsidy on the absolute volume of income (Table 9).

Correlations		GF_Subsidy	IF_Income_volume	IF_Income_ratio
GF_Subsidy	Pearson Correlation	1	-0,743**	-0,435*
	Sig. (2-tailed)		,000	,030
	N	25	25	25
IF_Income_volume	Pearson Correlation	-0,743**	1	0,739**
	Sig. (2-tailed)	,000		,000
	N	25	25	25
IF_Income_ratio	Pearson Correlation	-0,435*	0,739**	1
	Sig. (2-tailed)	,030	,000	
	N	25	25	25

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 9 Output of Pearson's correlation on the variable Subsidy and the variable Income

The observed correlations are mostly weaker than expected, such as is the case for the correlation between the income as a volume and as a ratio ($\rho=0.739$), highlighted in **orange**.

This is probably caused by the limited number of observations and consequent poor parameterization of the variables. Hence, as a comparing test, the non-parametric Spearman’s rank correlation test, has also been conducted on the relation of the amount of subsidy and other

incomes, again both as volume as ratio. As Table 10 shows, Spearman’s rho does also not show new significant correlations.

Correlations

			GF_Subsidy	IF_Income_ volume	IF_Income ratio
Spearman's rho	GF_Subsidy	Correlation Coefficient	1,000	-.475*	-.398*
		Sig. (2-tailed)	.	,016	,049
		N	25	25	25
	IF_Income_volume	Correlation Coefficient	-.475*	1,000	,666**
		Sig. (2-tailed)	,016	.	,000
		N	25	25	25
	IF_Income_ratio	Correlation Coefficient	-.398*	,666**	1,000
		Sig. (2-tailed)	,049	,000	.
		N	25	25	25

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

Table 10 Output of Spearman's rho on Subsidy and Income

8.2.2 H1b: Income and deliverables

A parametric test has been conducted to check for the relation of the income volume on the absolute number of imposed deliverables (referred to as deliverables volume) as shown in Figure 23.

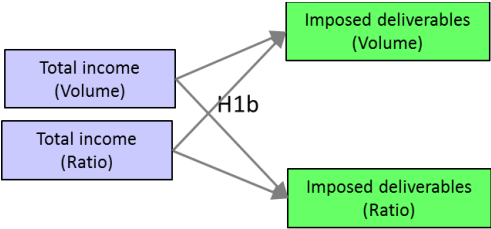


Figure 23 Conceptual model of H1b

Analysing the outcomes of Pearson’s correlation (Table 11) firstly the relation between the Income volume and the deliverables as volume and the deliverables as ratio are analysed. The correlation of the variable Income Volume and the Deliverables volume shows a significant, negative but meagre relation (rho = -0.434, p=0.030) for the relation of the variables Income volume and Deliverables volume. This is highlighted in dark green in Table 11. The relation of the variable Income volume and the variable Deliverables ratio is positive, but not significant (rho= 0.194, p=0.352), highlighted in light green.

Looking at the relation of the variables Independent income ratio has with both the variables Deliverables volume (p=0.317 and rho = 0.209) and Deliverables ratio (rho=0.061, p=0.771) shows

that both relations are positive but neither are significant. These values are highlighted in respectively orange and yellow in Table 11.

The correlation between the different dimensions of the same variable have already been evaluated and discussed in the previous paragraph (8.2.1).

Correlations		IF_Income volume	IF_Income ratio	OF_Deliverables volume	OF_Deliverables ratio
IF_Income_volume	Pearson Correlation	1	,739**	,434*	,194
	Sig. (2-tailed)		,000	,030	,352
	N	25	25	25	25
IF_Income_ratio	Pearson Correlation	,739**	1	,209	,061
	Sig. (2-tailed)	,000		,317	,771
	N	25	25	25	25
OF_Deliverables_volume	Pearson Correlation	,434*	,209	1	,627**
	Sig. (2-tailed)	,030	,317		,001
	N	25	25	25	25
OF_Deliverables_ratio	Pearson Correlation	,194	,061	,627**	1
	Sig. (2-tailed)	,352	,771	,001	
	N	25	25	25	25

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

Table 11 Output of Pearson's correlation on the variables Income and Deliverables

Again no new significant correlations were found conducting Spearman's rho as an extra non-parametric test (Table 12).

Correlations			IF_Income volume	IF_Income ratio	OF_Deliverables_ volume	OF_Deliverables ratio
Spearman's rho	IF_Income_volume	Correlation Coefficient	1,000	,666**	,424*	,220
		Sig. (2-tailed)	.	,000	,035	,291
		N	25	25	25	25
	IF_Income_ratio	Correlation Coefficient	,666**	1,000	,128	,110
		Sig. (2-tailed)	,000	.	,542	,601
		N	25	25	25	25
	OF_Deliverables_ volume	Correlation Coefficient	,424*	,128	1,000	,633**
		Sig. (2-tailed)	,035	,542	.	,001
		N	25	25	25	25
	OF_Deliverables_ ratio	Correlation Coefficient	,220	,110	,633**	1,000
		Sig. (2-tailed)	,291	,601	,001	.
		N	25	25	25	25

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

Table 12 Output of Spearman's rho on the variables Income and Deliverables

8.2.3 H1: Not controlled for covariates

A parametric test has been conducted on the relation of the amount of subsidy on the number of imposed deliverables, both as an absolute number as ratio. This test does not yet take the covariates income volume or independent income as ratio into account, as is displayed in Figure 24 Conceptual model of H1.1.

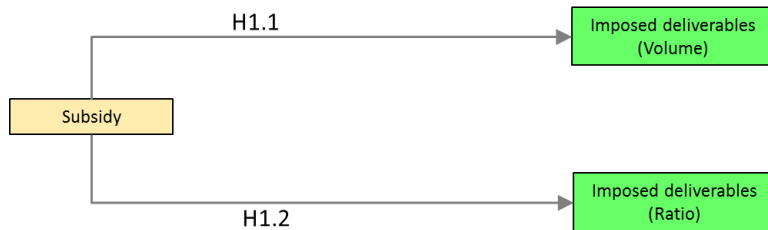


Figure 24 Conceptual model of H1.1

The output of Pearson’s correlation as displayed in Table 13 shows a negative and meagre relation that is not significant for H1.1, the relation of the amount of subsidy and the absolute number of imposed deliverables ($\rho = -0.226$, $p=0.278$). The relation in H1.2, the amount of subsidy on the deliverables ratio, is significant. Interestingly both relations are negative ($\rho = -0.396$, $p=0.050$), meaning that more subsidy does not stimulate the orchestras to meet the priorities set by the government; even the opposite happens.

Correlations ^a		GF_Subsidy	OF_Deliverables_ volume	OF_Deliverables_ ratio
GF_Subsidy	Pearson Correlation	1	-.226	-.396*
	Sig. (2-tailed)		.278	.050
OF_Deliverables_ volume	Pearson Correlation	-.226	1	.627**
	Sig. (2-tailed)	.278		.001
OF_Deliverables_ ratio	Pearson Correlation	-.396*	.627**	1
	Sig. (2-tailed)	.050	.001	

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).
 a. Listwise N=25

Table 13 Output of Pearson correlation on the variables Subsidy and Deliverables

8.2.4 H1: Finance related correlations

As parametric tests two partial correlations are conducted to test the relation of the absolute amount of subsidy on the imposed deliverables both as an absolute number and as ratio, controlled for covariate income as absolute volume and subsequently controlled for covariate independent income as ratio, as illustrated at the top of this paragraph (Figure 19). This is done in order to test

whether these covariates influence the relation of the subsidy administered and the programming behaviour.

Table 14 shows that when controlled for the covariate income volume a slightly positive relation can be seen for the relation of the amount of subsidy and the deliverables volume, but this relation is not significant ($\rho = 0,161$, $p = 0,452$).

Correlations

Control Variables			GF_Subsidy	OF_Deliverables volume
IF_Income_volume	GF_Subsidy	Correlation	1,000	,161
		Significance (2-tailed)	.	,452
		df	0	22
OF_Deliverables _volume	OF_Deliverables	Correlation	,161	1,000
		Significance (2-tailed)	,452	.
		df	22	0

Table 14 Output of a partial correlation of subsidy on deliverables volume controlled for income volume

However, Table 15 shows that the relation of the amount of subsidy on the deliverables ratio does show a significant, but slightly negative relation when controlled for the covariate independent income as ratio ($\rho = -0.411$, $p = 0.046$). This means that the amount of subsidy has a negative impact on the ratio of imposed deliverances, taking into account the influence of the percentage of other income. This result goes against the idea using subsidization as a means of controlling and influencing that aspect of society.

Correlations

Control Variables			GF_Subsidy	OF_Deliverables_ ratio
IF_Income_ratio	GF_Subsidy	Correlation	1,000	-,411
		Significance (2-tailed)	.	,046
		df	0	22
OF_Deliverables_ _ratio	OF_Deliverables	Correlation	-,411	1,000
		Significance (2-tailed)	,046	.
		df	22	0

Table 15 Output of partial correlation of subsidy on deliverables volume controlled for income ratio

The outcomes of the analysis show that hypothesis 1 stating that government subsidies influence the programming behaviour of the Dutch symphony orchestra can be confirmed. Interestingly however, the influence measured is a negative one. So instead of the expectation that orchestras with a lower

percentage of subsidies react less to policy changes, these orchestras react more to the changes.

Figure 25 Results H1 Figure 25 visualizes the relations that were found analysing hypothesis 1.

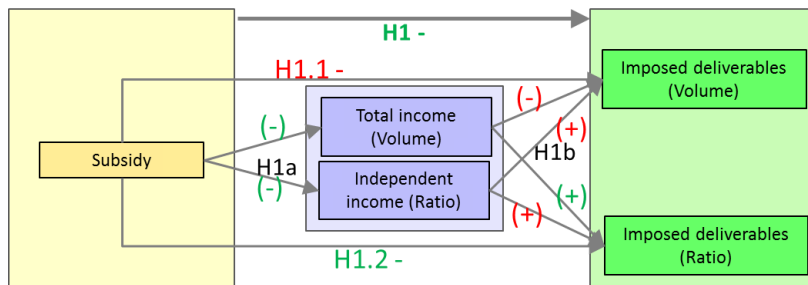


Figure 25 Results H1

8.3 Hypothesis 2

The analysis of hypothesis 2 is not as complicated as it was for testing hypothesis 1. This also shows in the conceptual model shown in Figure 26, because all variables are being captured in one dimension. Hence, the analysis of hypothesis 2 is discussed in a slightly different order: at first the main hypothesis H2 is analysed, followed by the partial hypotheses.

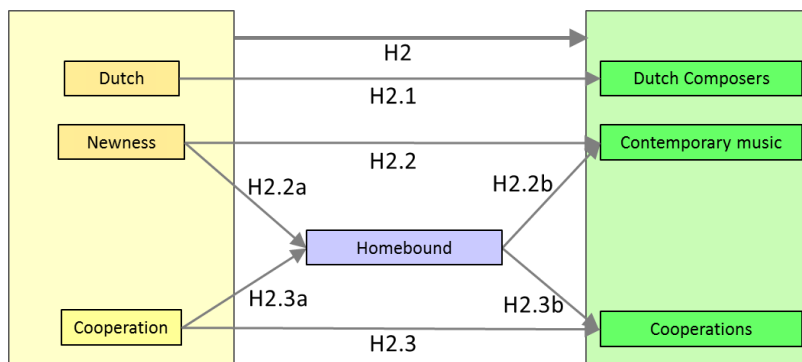


Figure 26 Conceptual model of H2

8.3.1 H2: Content related correlations

In order to test H2, overall variables of all relevant policy keywords (GC) and all relevant content of the orchestra programming (OC) behaviour need to be counted up, resulting in

$$GC_All = GC_Dutch + GC_Innovation + GC_Cooperation.$$

$$OC_All = OC_Dutch + OC_Contemporary + OC_Coproductio.$$

With these new variables parametric tests are conducted with the policy keywords on imposed performances as ratio.

A T-test is used ($t=3,018$, $p=0.006$) showing a significant positive relation. First a Levene's Test for equality of variances is conducted, since this results in $F=0,074$ and $p=0.787$, the null hypothesis assuming equal variances will not be rejected ($0,787 > 0,05$).

		Levene's Test for Equality of Variances		t-test for Equality of Means		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
		F	Sig.	t	df			Sig. (2-tailed)	Lower	Upper
OC_All	Equal variances assumed	,074	,787	3,018	23	,006	,12188	,04038	,03834	,20542
	Equal variances not assumed			2,945	19,221	,008	,12188	,04139	,03532	,20844

Table 16 Output of independent sample test for all content related program elements

With equal variances assumed, analysing the outcome of the T-test the first row has to be taken into account, showing $P= 0.006$, which is a significant result rejecting the null hypothesis of no relation for the policy keywords on imposed performances as a ratio ($0,006 < 0,05$ so the null hypothesis is rejected).

A Pearson correlation of the number of keywords with the number of imposed performances as ratio shows a meagre positive relation ($\rho = 0.533$).

Correlations ^a		GC All	OC All
GC_All	Pearson Correlation	1	,533**
	Sig. (2-tailed)		,006
OC_All	Pearson Correlation	,533**	1
	Sig. (2-tailed)	,006	

** . Correlation is significant at the 0.01 level (2-tailed).
a. Listwise N=25

Table 17 Output of Pearson correlation of H2

Figure 27 is a scatter plot which illustrates very clearly how the observations of the imposed performances as ratio are spread per policy period and how the observations of the two policy periods differ from each other. These imposed performances are the sum of all Dutch pieces performed, all contemporary music performed and all performances that include a coproduction.

Imposed performances as % of total performances as a result of policy emphasis

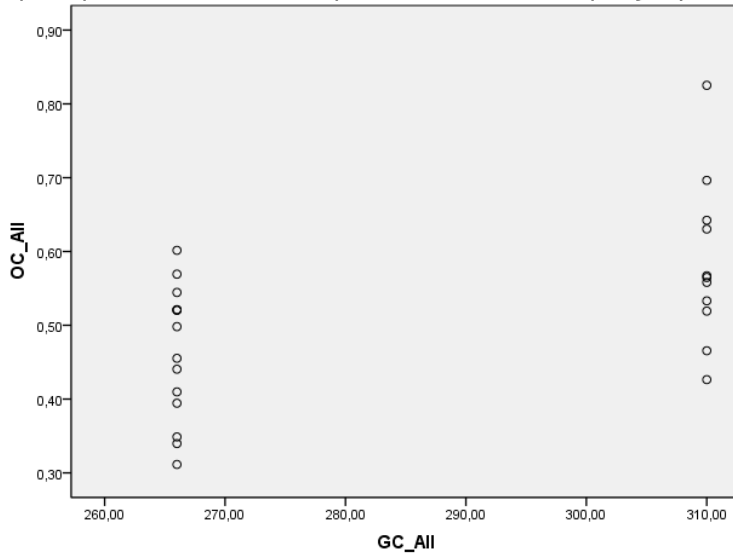


Figure 27 Scatter plot showing the imposed performances as ratio per policy period

Hypothesis 2, stating that government emphasis is positively reflected in the musical content programmed by the Dutch symphony orchestras, is confirmed; a positive significant relation exists between the policy keywords regarding content and the content of the orchestra programming behaviour. Subsequently, the partial hypotheses on the programming content will be analysed individually.

8.3.2 H2.1: Dutch composers

Partial hypothesis 2.1 concerns the relation of the policy keywords for Dutch composers on the imposed performances with Dutch composers as ratio (Figure 28) has also been tested by parametric tests, firstly by conducting a T-test, followed by Pearson’s correlation test.

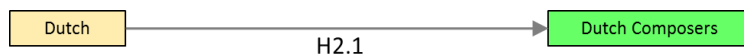


Figure 28 Conceptual model of H2.1

Table 18, displaying the output of Levene’s F-Test, shows that equal variances cannot be assumed (F=4,521, p=0.044), and conducting a T-test on the policy keywords on imposed performances as ratio, a not significant (p=0.123), but positive relation was found (t=1,016, p=0.171).

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
OC_Dutch	Equal variances assumed	4,521	.044	1,601	23	.123	.0283398	.0177054	-.0082865	.0649661
	Equal variances not assumed			1,454	12,147	.171	.0283398	.0194869	-.0140614	.0707409

Table 18 Output of independent sample test on Dutch composers

Pearson's correlation showed a slight positive ($\rho = 0.317$) but not statistically significant ($p = 0.123$) relation of the policy keywords on the performances of Dutch compositions as ratio (Table 19).

Correlations ^a			
		GC_Dutch	OC_Dutch
GC_Dutch	Pearson Correlation	1	.317
	Sig. (2-tailed)		.123
OC_Dutch	Pearson Correlation	.317	1
	Sig. (2-tailed)	.123	

a. Listwise N=25

Table 19 Output Pearson correlation for H2.1

No significant relation was found for the partial hypothesis 2.1 that if government emphasizes on more Dutch compositions, it is positively reflected in the number of Dutch compositions programmed during a four-year term.

8.3.3 H2.2: Contemporary music

Partial hypothesis 2.2 (Figure 29) regarding the relation of the policy keywords for Innovation and the performances of contemporary music as ratio shall at first be tested just as hypothesis 2.1, without correcting for the possible influence of covariate Homebound of this relation. Subsequently it will be tested again with Pearson's correlation, corrected for covariate Homebound.

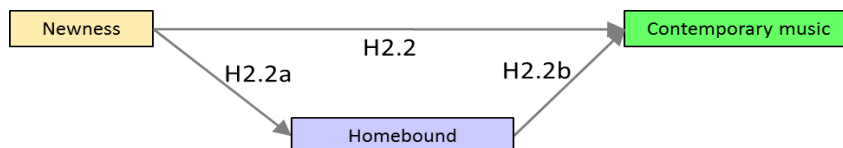


Figure 29 Conceptual model of H2.2

Conducting a T-test and Pearson's correlation solemnly on H2.2, without correction, shows a positive but no significant relation of policy keywords on imposed performances as ratio is found ($\rho = 0.382$, $t = 1,981$, $p = 0.060$), see also Table 20.

Table 21 shows the result of the partial correlation conducted for correcting the relation of policy keywords on imposed performances as ratio for the ratio of home-played performances. This relation is weak but significant ($\rho = 0.441$, $p = 0.031$).

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means			95% Confidence Interval of the Difference			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
OC_Contemporary	Equal variances assumed	1,167	,291	1,981	23	,060	,0575126	,0290284	-,0025330	,1175582
	Equal variances not assumed			1,907	17,707	,073	,0575126	,0301655	-,0059380	,1209632

Table 20 Output of independent sample test for dependent variable Contemporary music

Correlations			GC_Innovation	OC_Contemporary
Control Variables				
IC_Homebound	GC_Innovation	Correlation	1,000	,441
		Significance (2-tailed)	.	,031
		df	0	22
OC_Contemporary	OC_Contemporary	Correlation	,441	1,000
		Significance (2-tailed)	,031	.
		df	22	0

Table 21 Partial correlation correcting H2.2 for covariate Homebound

Pearson's correlation also shows a negative not significant relation of the governments' emphasis on newness (in Table 22 referred to as GC_Innovation) and the covariate homebound ($\rho = -0,165$, $p = 0,432$), and a positive but neither significant relation for the covariate homebound on the performances of contemporary music ($\rho = 0,244$, $p = 0,241$).

Correlations ^a				
		GC_Innovation	IC_Homebound	OC_Contemporary
GC_Innovation	Pearson Correlation	1	-,165	,382
	Sig. (2-tailed)		,432	,060
IC_Homebound	Pearson Correlation	-,165	1	,244
	Sig. (2-tailed)	,432		,241
OC_Contemporary	Pearson Correlation	,382	,244	1
	Sig. (2-tailed)	,060	,241	

a. Listwise N=25

Table 22 Output Pearson correlation for H2.2

After correcting for covariate homebound, a positive significant relation is found, confirming partial hypothesis 2.2 that if the government emphasizes on contemporary music, it will be positively reflected in the number of contemporary compositions programmed during a four-year term.

Although the covariate does influence the relation, no significant relations were found for either the policy keywords on the ratio of home-played performances, nor for the relation of the ratio of home-played performances and the percentage of contemporary pieces performed.

8.3.4 H2.3: Co-productions

For testing partial hypothesis 2.3, questioning the relation of the policy keywords for Cooperation on the imposed cooperative performances as ratio (Figure 30), the same steps will be taken as were taken for testing hypothesis 2.2. Because of the dichotomous policy period, the testing of this hypothesis again starts by conducting a T-test, on the relation of the policy keywords on the imposed performances as ratio. First, this relation is tested without correcting for the covariate homebound.

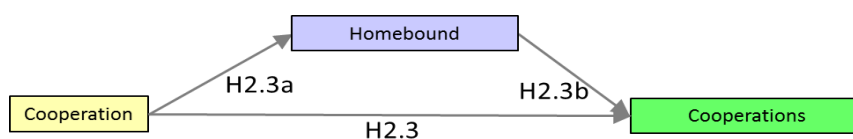


Figure 30 Conceptual model of H2.3

Again Levene's test for equality of variances is firstly conducted, showing in Table 23 that equal variances can be assumed ($p=0.413 > 0.05$). Next, the T-test is conducted and followed by Pearson's correlation, again, not yet corrected for the covariate homebound. The two tests show a slight negative relation that is not significant ($\rho = -0.314$, $t=1,585$, $p=0.127$).

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means			95% Confidence Interval of the Difference			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
OC_Coproduction	Equal variances assumed	.698	.413	1,585	23	.127	.0360272	.0227356	-.0110049	.0830593
	Equal variances not assumed			1,524	17,674	.145	.0360272	.0236350	-.0136940	.0857483

Table 23 Output of independent sample test for dependent variable Cooperation

Checking for the covariate homebound as the number of home-played performances as ratio shows no significant relations for either H2.3a ($\rho= 0.165$, $p= 0.432$), representing the relation of the Policy keywords for Cooperation on the covariate homebound nor for H2.3b ($\rho= -0.180$, $p= 0.388$), representing the relation of the covariate on the on imposed cooperative performances as ratio (Table 24).

Correlations ^a		GC_Cooperation	IC_Homebound	OC_Coproduction
GC_Cooperation	Pearson Correlation	1	,165	-,314
	Sig. (2-tailed)		,432	,127
IC_Homebound	Pearson Correlation	,165	1	-,180
	Sig. (2-tailed)	,432		,388
OC_Coproduction	Pearson Correlation	-,314	-,180	1
	Sig. (2-tailed)	,127	,388	

a. Listwise N=25

Table 24 Output Pearson correlation for H2.3

A partial correlation on H2.2a and H2.2b was conducted to correct the relation of the keywords for Cooperation on imposed cooperative performances as ratio for ratio of home-played performances. As Table 25 displays, this still shows no significant relation ($\rho = -0.293$, $p = 0.165$).

Control Variables		GC_Innovation	OC_Contemporary
IC_Homebound	GC_Innovation	Correlation	1,000
		Significance (2-tailed)	.
		df	0
OC_Contemporary	GC_Innovation	Correlation	,441
		Significance (2-tailed)	,031
		df	22
GC_Innovation	OC_Contemporary	Correlation	,441
		Significance (2-tailed)	,031
		df	22
OC_Contemporary	GC_Innovation	Correlation	,441
		Significance (2-tailed)	,031
		df	22

Table 25 Partial correlation correcting H2.3 for covariate Homebound

Although not significant, a negative correlation was found regarding the policy keywords on cooperation and the number of co-productions performed. No evidence was therefore found for the partial hypothesis 2.3 stating that if the government emphasizes on co-productions, either supportive or on an initiating level, it will be positively reflected in the number of co-productions and co-operations.

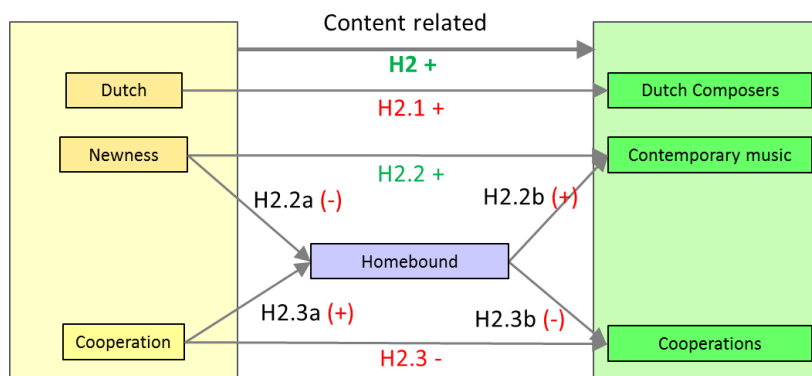


Figure 31 Results for H2

In an overall picture, the results for testing hypothesis 2 and its partial hypotheses, all relations can be displayed as in Figure 31: green “H2” representing significant relations, red “H2.1” representing no significant relation and the plusses and minuses whether it is a positive (+) or negative (-) relation. For example: H2.1 + represents a positive, but not significant relation between the policy keyword Dutch and the program aspect Dutch Composers.

8.4 Hypothesis 3

The analysis of hypothesis 3 (Figure 32) is conducted following the same pattern as for analysing hypothesis 2. Again the main hypothesis H3 is analysed first, followed by the partial hypotheses.

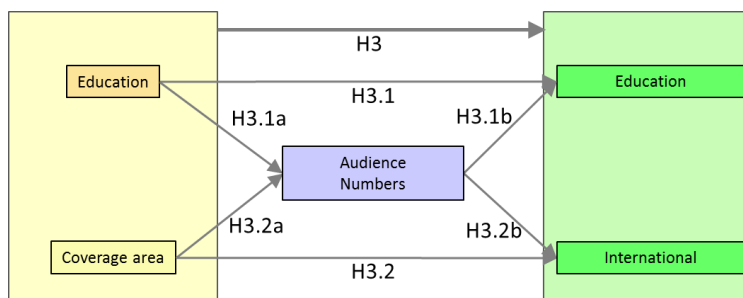


Figure 32 Conceptual model of H3

8.4.1 H3: Audience related correlations

Testing hypothesis 3 and partial hypotheses 3.1 and 3.2 is done by conducting the same tests as used for testing hypothesis 2 and its partial hypotheses. For testing H3, firstly, two overall variables representing all related policy keywords (GA) and all related orchestra programming elements (OA) have been created:

GA_All=GA_Education+GA_Domain.

OA_All=OA_Educational+OA_International.

With these new variables parametric tests are conducted with the relevant policy keywords on the imposed performances as ratio.

Because the policy period is actually dichotomous, also for testing H3, a T-test is used. Firstly a Levene’s test for equality of variances is conducted showing that equal variances can be assumed (F=0,122, p=0.730 > 0.05). Presuming equality of variances, the T-test shows no significant relation (t= -0.833, p=0.413) for the relevant audience related policy keywords and the audience related programming elements, all displayed in Table 26.

		Levene's Test for Equality of Variances		t-test for Equality of Means			95% Confidence Interval of the Difference			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
OA_All	Equal variances assumed	,122	,730	-,833	23	,413	-,04481	,05381	-,15612	,06649
	Equal variances not assumed			-,790	16,159	,441	-,04481	,05673	-,16497	,07534

Table 26 Output of independent sample test for all audience related program elements

Pearson's correlation (Table 27), subsequently shows a slight negative relation ($\rho = -0.171$) for the relation of audience related policy keywords and the actual imposed audience related programming aspects as ratio.

		GA_All	OA_All
GA_All	Pearson Correlation	1	-,171
	Sig. (2-tailed)		,413
OA_All	Pearson Correlation	-,171	1
	Sig. (2-tailed)	,413	

a. Listwise N=25

Table 27 Output of Pearson correlation of H3

The spread of the observations of all audience related performance aspects, which are for this research defined as all educational performances and all international performances, are shown in Figure 27. The scatter plot shows clearly the difference between the two policy periods. The observations are clearly grouped per period, showing one spike within the second term.

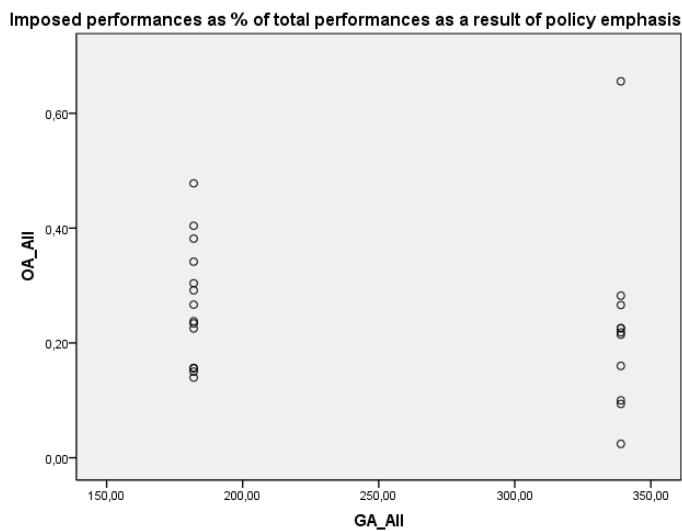


Figure 33 Scatter plot visualising the two distinct policy periods

Hypothesis 3, stating that government emphasis on audiences is positively reflected in the locations and formats programmed by the Dutch symphony orchestras, could not be confirmed, because no significant relation was found. Subsequently, the partial hypotheses on the programming content will be analysed individually.

8.4.2 H3.1: Education

Comparable to partial hypothesis 2.2 partial hypothesis 3.1 questioning the relation of the policy keywords for Education on the imposed educational performances as ratio (Figure 34) will be tested with the same parametric tests. H3.1 will firstly be tested by conducting Levene’s test for equality of variances, followed by a T-test and Pearson’s correlation without correction for covariate Audience numbers. Subsequently it will be tested again with Pearson’s correlation, corrected for covariate Audience numbers.

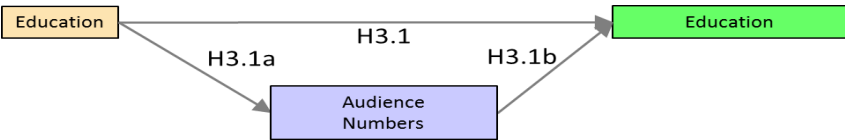


Figure 34 Conceptual model of H3.1

Table 28 presents the output of Levene’s test for equality and the T-test. Levene’s test for equality shows that equal variances can be assumed (F=0,938, p=0.343). Conducting the T-test shows a positive but not significant relation for the policy keywords representing education and the educational program aspects of the orchestras (t= -0,597, p=0.557).

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
OA_Educational	Equal variances assumed	.938	.343	-.597	23	.557	-.0224734	.0376622	-.1003837	.0554368
	Equal variances not assumed			-.571	17,011	.576	-.0224734	.0393910	-.1055771	.0606303

Table 28 Output of independent sample test on the educational performances programmed

Testing Pearson’s correlation, without taking into account the covariate Audience numbers shows a small negative relation for the policy keywords on educational programming behaviour (rho = -0.123) which is not significant (p=0.557), as can be seen in Table 29.

A Pearson's correlation correcting for the covariate Audience numbers shows a significant negative relation for the audience size on the educational programming behaviour of orchestras (rho = -0.435, p = 0.030), also derived from Table 29.

Correlations ^a		GA_Education	OA_Educational	IA_Audience
GA_Education	Pearson Correlation	1	-.123	-.069
	Sig. (2-tailed)		.557	.741
OA_Educational	Pearson Correlation	-.123	1	-.435*
	Sig. (2-tailed)	.557		.030
IA_Audience	Pearson Correlation	-.069	-.435*	1
	Sig. (2-tailed)	.741	.030	

*. Correlation is significant at the 0.05 level (2-tailed).

a. Listwise N=25

Table 29 Output of Pearson Correlation on H3.1

Table 30 shows the output of a partial Pearson's correlation on the policy keywords for Education on the imposed educational performances as ratio corrected for covariate Audience numbers. This shows a negative, but still not significant relation (rho = -0.171, p = 0.424).

Correlations			GA_Education	OA_Educational
Control Variables				
IA_Audience	GA_Education	Correlation	1,000	-.171
		Significance (2-tailed)	.	.424
		df	0	22
OA_Educational	OA_Educational	Correlation	-.171	1,000
		Significance (2-tailed)	.424	.
		df	22	0

Table 30 Partial correlation correcting H3.1 for covariate Audience numbers

Only a significant negative relation is found for the covariate audience size and the percentage of educational programs, meaning that the greater the size of the audience is, the fewer educational performances are programmed. The findings do not support hypothesis 3.1 which states that if the government emphasizes on education, it is positively reflected in the number of projects and concerts with an educational purpose throughout a four-year term.

8.4.3 H3.2: International exposure

Partial hypothesis 3.2 about the relation of policy keywords for regarding the coverage area on the imposed international performances as ratio is visualized in Figure 35 Conceptual model of H3.2. this relation will again be tested using the same parametric tests. Firstly a T-test and Pearson's

correlation are conducted without correcting the outcomes for the covariate Audience numbers, and subsequently a Pearson’s correlation including the covariate.

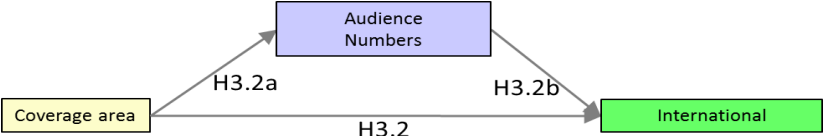


Figure 35 Conceptual model of H3.2

Table 31 displays that Levene’s test for equality of variances shows that equality can be assumed (F=0,109, p=0.744). Conducting a T-test on the relation of the policy keywords for Coverage area (in the graphs referred to as Domain) and the international performances programmed shows no significant result (t= -0,481, p=0.635).

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
OA_International	Equal variances assumed	,109	,744	-,481	23	,635	-,0223404	,0464582	-,1184485	,0737657
	Equal variances not assumed			-,487	22,464	,631	-,0223404	,0458942	-,1174052	,0727244

Table 31 Output of independent sample test on the independent variable International performances

Conducting a Pearson’s correlation without correcting for the covariate Audience numbers (Table 32), shows a slight negative relation of the policy keywords regarding the coverage area on the international performances as ratio (rho = -0.100) that is not significant (p=0.635).

Checking for the covariate Audience numbers shows a slight negative, but not significant result for H3.2a, which is the relation of the policy keywords on the audience numbers ((rho= -0.069, p=0,741), but it does show a significant positive relation for H3.2b which is the relation of audience numbers on international performances (rho= 0,637, p=0,001), both also derived from Table 32.

Correlations^a

		GA_Domain	OA_International	IA_Audience
GA_Domain	Pearson Correlation	1	-.100	-.089
	Sig. (2-tailed)		,635	,741
OA_International	Pearson Correlation	-.100	1	,637**
	Sig. (2-tailed)	,635		,001
IA_Audience	Pearson Correlation	-.089	,637**	1
	Sig. (2-tailed)	,741	,001	

** . Correlation is significant at the 0.01 level (2-tailed).
a. Listwise N=25

Table 32 Output of Pearson Correlation on H3.2

The output of a partial correlation testing the relation of the policy keywords regarding the coverage area and the international performances by the orchestras, corrected for covariate audience numbers is displayed in Table 33. This also shows a slight negative and not significant result (rho = -0.072, p = 0.737).

Correlations

Control Variables			GA_Domain	OA_International
IA_Audience	GA_Domain	Correlation	1,000	-.072
		Significance (2-tailed)	.	,737
		df	0	22
OA_International	OA_International	Correlation	-.072	1,000
		Significance (2-tailed)	,737	.
		df	22	0

Table 33 Partial correlation correcting H3.2 for covariate Audience numbers

Hypothesis 3.2 stating that if the government emphasizes on the cultural range and on international exposure, this is positively reflected on the number of concerts organized abroad, is not confirmed with the findings of the analysis. Only a significant result was found regarding the relation of the covariate audience numbers and the number of international performances.

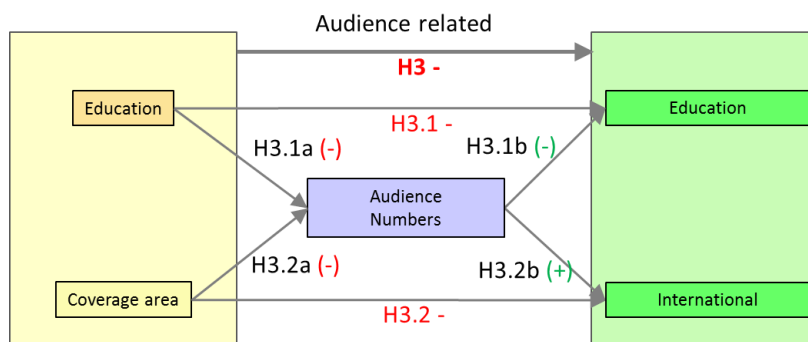


Figure 36 Results for H3

In an overall picture, the results for testing hypothesis 3 and its partial hypotheses, all relations can be displayed as in Figure 36: green “(-)” representing significant relations, red “H3” representing no significant relation and the plusses and minuses whether it is a positive (+) or negative (-) relation. For example: H3.1b (-) represents a significant, negative relation of the covariate Audience numbers and the program aspect Education.

8.5 Final test

As a final test a regression will be executed over all government policies G_All (=GC_All + GA_All) and the subsidy on all imposed deliverables as a ratio (=OC_All + OA_All), corrected for the control variable Independent Income (ratio).

A backwards stepwise regression analysis is conducted including all variables that showed significant relations at the previous analyses. This extra test verifies which of these factors contribute significantly to the variance of the dependent variable. This variance of the dependent variable is the differentiation of the output of the deliverables ratio over the years. Analysed separately all these variables seemed to have a significant influence, joined together some may lose part of their significance.

Note that the significance level for removing a variable when conducting a backwards stepwise regression analysis is not 5% but 10%.

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	IF_Income_ratio, G_All, GF_Subsidya	.	Enter
2	.	IF_Income_ratio	Backward (criterion: Probability of F-to- remove >= ,100).

a. All requested variables entered.
b. Dependent Variable: OF_Deliverables_ratio

Table 34 Output backwards regression analysis

Table 34 displaying the output of the backwards regression analysis over all government policies and the subsidy on all imposed deliverables as a ratio, corrected for the control variable Independent Income ratio shows that the control variable income ratio is removed from the model. Table 35 shows that the variable Independent income ratio is indeed not significant (p=0.592 > 0.1).

Excluded Variables^a

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance	
2	IF_Income_ratio	-.110a	-.545	.592	-.118	.807

a. Predictors in the Model: (Constant), G_All, GF_Subsidy
b. Dependent Variable: OF_Deliverables_ratio

Table 35 Output defining model 2

For the coming analyses the output of the second model is of interest, since this model includes only variables that are statistically significant.

Table 36 subsequently shows the output of an ANOVA-test which tests the significance of the model as a whole. The null-hypothesis for this ANOVA states that the coefficients of the independent variables, which are G_all and GF_Subsidy, are not statistically different from zero, meaning that the observed values are coincidental and do not prove that the relations found also exist in the overall population.

To testing the null-hypothesis the ANOVA uses an F-distribution; the F-value for this test is $F=4.584$ with a probability, the p-value, of $p=0.022 < 0.05$ which means that the null-hypothesis is rejected: the overall model can be considered to be significant.

ANOVA^c

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.046	3	.015	3,057	.051a
	Residual	.106	21	.005		
	Total	.152	24			
2	Regression	.045	2	.022	4,584	.022b
	Residual	.107	22	.005		
	Total	.152	24			

a. Predictors: (Constant), IF_Income_ratio, G_All, GF_Subsidy
b. Predictors: (Constant), G_All, GF_Subsidy
c. Dependent Variable: OF_Deliverables_ratio

Table 36 Output of the regression ANOVA-test

Since the regression's ANOVA-test shows significance for the overall model ($p=0.022$), the strength (correlation) and size (slope) of the individual coefficients can be interpreted.

Returning to model 2 of the backwards regression analysis, the correlation of the independent variables G_All and GF_Subsidy and the independent variable OF_Deliverables_Ratio is evaluated. This is displayed as a beta-value in

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	,508	,144		3,514	,002
	GF_Subsidy	-3,323E-8	,000	-,426	-2,103	,048
	G_All	,000	,000	,364	1,994	,059
	IF_Income_ratio	-,174	,320	-,110	-,545	,592
2	(Constant)	,450	,097		4,646	,000
	GF_Subsidy	-2,946E-8	,000	-,378	-2,108	,047
	G_All	,000	,000	,371	2,068	,051

a. Dependent Variable: OF_Deliverables_ratio

Table 37; **beta=0.371** for GF_Subsidy and **beta=-0.378** for G_All, both values are significant, showing p-values of respectively **p=0.047** and **p=0.051**.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	,508	,144		3,514	,002
	GF_Subsidy	-3,323E-8	,000	-,426	-2,103	,048
	G_All	,000	,000	,364	1,994	,059
	IF_Income_ratio	-,174	,320	-,110	-,545	,592
2	(Constant)	,450	,097		4,646	,000
	GF_Subsidy	-2,946E-8	,000	-,378	-2,108	,047
	G_All	,000	,000	,371	2,068	,051

a. Dependent Variable: OF_Deliverables_ratio

Table 37 Output of the cohesion of the independent variables with the dependent variable

For the two independent variables cohesion is found of about 37%, showing a negative relation for the subsidy and the imposed deliverables and a positive relation of the policies and the imposed deliverables. This means that 37% of the variance of the dependent variable (Deliverables ratio) can be explained by the variance of the corresponding independent variable. The beta-value shows the correlation within the model and is similar to Pearson’s rho-values.

Now the strength of the model can be analysed. The strength depends on the percentage of all variance of the dependent variable is explained by the variance of the two independent variables. To test this, an R^2 , being the squared correlation which is a measure for the explanatory value of the

model. The R^2 shows a value of $R^2=0.294$, however this figure increases as the number of explanatory variables increases. The adjusted R^2 corrects for this bias; adjusted $R^2=0.230$ (Table 38).

Hence it can be concluded that 23.0% of the variance of the imposed performances as ratio can be explained by the variance in subsidies and in policies.

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.551a	.304	.205	.0708863
2	.542b	.294	.230	.0697438

a. Predictors: (Constant), IF_Income_ratio, G_All, GF_Subsidy
 b. Predictors: (Constant), G_All, GF_Subsidy
 c. Dependent Variable: OF_Deliverables_ratio

Table 38 Model summary representing the overall strength of the model

The remaining, unexplained 73% of the variance of the dependent variable, which is called the residual, should also be normally distributed; this is a requisite for a regression analysis. Figure 37 displays the distribution of the residuals of the observed variance in the dependent variable Imposed deliverables as ratio.

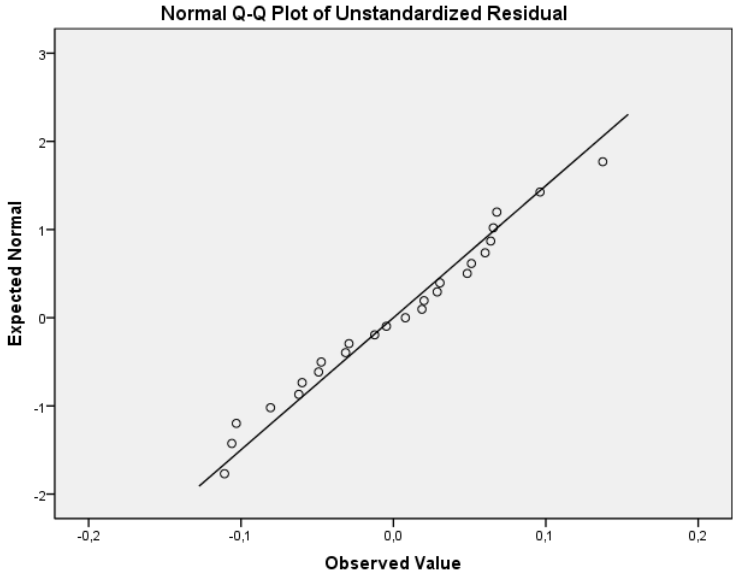


Figure 37 Visualisation of the distribution of the residual

The distribution of the residuals is tested with the Shapiro-Wilk test. This is the same test as used for the preliminary checks. The Shapiro-Wilk test shows a p-value of $p=0.663$ (Table 39); this does not

exceed the statistical significance level of 95% and therefore it can indeed be considered as normally distributed.

Tests of Normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,090	25	,200*	,971	25	,863
Standardized Residual	,090	25	,200*	,971	25	,863

a. Lilliefors Significance Correction
 *. This is a lower bound of the true significance.

Table 39 Output of normality tests

This final test answers the main research question, inquiring to what extent governmental interference, by subsidization and the attached policies influences the programming behaviour of the professional Dutch symphony orchestras in the Netherlands. It shows that 23.0% of the variance of the imposed performances as ratio can be explained by the combined variance in subsidies and policies.

Now that all hypotheses and the research question are statistically tested, the conclusions that can be drawn based on the outcomes, some restrictions and further recommendations are discussed in the subsequent chapters.

9 Conclusions

Based on the available data of over 7000 items some general conclusions can be drawn regarding the average number of pieces performed and the amount of subsidy. The absolute number of performances seems to be growing since the beginning of the second term, i.e. since 2004. The number of performances per orchestra per year varies from 200 to roughly 400. The total number of performances added up for all nine years do not vary as much; all orchestras have performed between 2300 and 2500 pieces during the research period. Of all these performances an average of 48% was imposed deliverables, varying from 37% to 67% per orchestra.

The received subsidy per year per orchestra varies from 2 to 6 million euros at a turnover per four year term varying from 27 to 54 million euros per orchestra. The percentage of the income that comes from state subsidization varies from 65% up to 85%. The allocated subsidies show a growing trend per policy period, but with the second term starting lower than the last year of the first period. Nevertheless, the subsidy is slightly higher during the second period; however, these results are not corrected for inflation. Another interesting finding was that the efficiency of the allocated subsidy measured in euro per imposed performance varies greatly with the HGO receiving far more subsidy per imposed performance than the other two orchestras. Although the three orchestras may not be a fully representative sample for all professional Dutch orchestras, these findings are an indication for the dependence on state subsidies of the Dutch orchestra population.

H1 Government subsidies influence the programming behaviour of the Dutch symphony orchestras: If a larger amount of subsidy is given to an orchestra, this will increase the dependence of the orchestra on the government. Similarly, orchestras with a lower percentage of subsidies react less to policy changes).

Hypothesis 1 can be partly confirmed. Interestingly the influences measured are negative and not positive as presumed. So instead of the expectation that orchestras with a lower percentage of subsidies react less to policy changes, they react more. A significant relation was only found on the ratio of imposed deliverables, not on the volume of imposed deliverables.

Two possible explanations can be found; one concerning the data used and the other concerning the model. Firstly, there may be other orchestra characteristics influencing the amount of subsidy received; the data suggests a difference in characteristics between urban orchestras and provincial orchestras, provincial orchestras are expected to perform in various cities in their region. This may require more financial support, whereas it may not be as compatible with other policies. Another explanation can be possibly found within the model; this model only includes state-subsidization and

therefore may provide a distorted picture of the dependency of the orchestras on subsidy and the national policies related to it. Most urban orchestras receive a vast amount of local subsidy that is affiliated to the state subsidy.

H2 Government emphasis is positively reflected in the musical content programmed by the Dutch symphony orchestras.

There proved to be a significant positive relation between the keywords in the policies and the content of the programming. However, for the sub-hypotheses, only a significant relation between the keyword newness and the programming of contemporary music was found (H2.2). For Dutch compositions (H2.1) and co-productions (H2.3) no significant relations were found. Also the control variable homebound proved to be not significant.

H3 Government emphasis on audiences is positively reflected in the locations and formats programmed by the Dutch symphony orchestras.

No significant negative relation was found for H3 and its sub-hypotheses. Although not significant, it is interesting to note that the relations found were negative. The sub-hypotheses on education and international exposure showed both negative relations for the programming behaviour and the policy keywords. The control variable audience numbers showed to be significantly related to both educational programming as international programming behaviour. These findings are possibly misleading; educational activities, although undertaken for many years by the orchestras, were not included in the annual reports until recently, and are still recorded in a poorly and incomplete fashion.

Summarized: hypothesis 1 and 2 are confirmed. It seems that the dataset is too small for testing the more specific sub-hypotheses, as a result of which few of those results are significant. However, more important is the answering of the main research question: *To what extent do governmental policies influence the programming behaviour of the professional Dutch symphony orchestras in the Netherlands?*

The overall model as tested in 8.5 reverts to this research question by combining the findings of the individual hypotheses. The results of this research show that 23.6% of the variance of the professional Dutch symphony orchestras can be explained by the variance in subsidies and policies of the programming behaviour. The lowness of this percentage is most likely due to the lack of variance of the policy variables since only two terms were included in the dataset. It is important to note that this conclusion has a limited external validity since the sample of orchestras is not fully

representative for the population and the variable GF_Subsidy did not meet the requirement of a normal distribution. However, the result can be considered an indication for the orchestra population as a whole.

The statistical findings justify a firm stating of this outcome, however comments need to be made regarding the strength and validity of these conclusions. They will be discussed in the next chapter.

The greatest outcome of this research is that this attempt to incorporate the policies behind subsidization in a statistical model proved to be not only manageable, but, despite a very limited dataset, already significant relations were found using the model. Hence, it can be stated that it is indeed possible to test the relation between governmental policies and cultural programming behaviour and that this model is a good approach doing so.

In retrospect, some of the outcomes of this research differ from findings reviewed in chapter 5. DiMaggio and Stenberg (Dimaggio & Stenberg, 1985) claim that both the size of the budget and the location have a major impact on the nonconformity of the theatres repertoire. One could therefore expect the programming behaviour of the urban orchestras to have a more independent programming behaviour than the provincial orchestras. Nonetheless, it appears to be the other way around since the HGOs' programming behaviour deviates most from the priorities distilled from the government policies. Pierce (Pierce, 2000) states that large opera companies possess more programming autonomy than those with smaller budgets. However, the results of this research did not show a clear relation between the size of the budget and degree of compliance to the priorities set by the government. Lastly, the assumption that educational programs help to increase the size of the audience seems to be contradicted, since a negative relation was found concerning the audience size and educational programming aspects. One should note, however, that the time span of this research is too limited to show a possible long term influence relation.

10 Discussion and recommendations

The outcomes of this research explain about 23% of the variance of the dependent variable. This automatically raises the question what would account for the unexplained 74% of variance.

Throughout this chapter, the limitations of this research, as presented in chapter 6, will be reviewed, and various explanations for the limited explanatory power will be discussed.

First, the research design will be reviewed, followed by a review of the quality of the dataset and the statistical consequences. Finally, possible improvements and extensions to the model are discussed.

10.1 Research design

The statistical approach of this research worked out very well. All variables could be transformed into the ratio variables required for testing the hypotheses. The statistical relations found are strong regarding the limited size of the dataset; this reinforces the strength of the model used.

Collecting the data from orchestras was one of the main practical difficulties during this research. Furthermore, finding a way to quantify the priorities of the government proved to be challenging. With the data used, no alternative records could be created in order to extend the dataset. Other thinkable sources for orchestra programming data were sought, but unfortunately not found. Other sources for policy data one could think of are other documents published by the Ministry of Culture; however, no additional documents represent the official policies for the period prescribed.

Alternative methods of collecting data are possible. The essence of the research question is about the influence of the governmental policies, which encompass the cultural sector as a whole. Therefore the programming behaviour of other cultural sectors can be used as a measure, such as theatre companies, dance companies or even exhibitions of museums of which possibly standardized datasets exists, saving the trouble of collecting data and creating a new dataset. To create a greater dataset on the policy data, other policy documents and reports of debates concerning the cultural policies may be added. This will be more difficult to interpret, and, moreover, a distribution code may be required to discern the importance of the various types of policy data.

A possible explanation for the relatively weak explanatory power of the final model is the asynchronous changes of policies and programming behaviour, rather than the presupposed synchronicity. The descriptive statistics executed in chapter 7, however, did not indicate that the presupposed synchronicity has distorted the outcomes of the analysis.

10.2 Quality of dataset

The size of the dataset can be considered good with more than 7000 entries, but grouped, it contains only 25 records. This is the main reason why the statistical requirement of working with normal distributed variables was not met.

One of the weaknesses of this research is that not all prerequisites for the conducted tests are met: the dataset is limited in size and not all variables meet the requirement of a normal distribution.

The independent variables Subsidy and intermediate variable Income_ratio are not sufficiently distributed in a normal fashion. As a consequence the statistical validity of the conclusions regarding the amount of subsidy administered is limited.

This limited number of records also causes disproportional variances. For example, if you monitor the time of deliverance of the newspaper for three days and one day the paper is delivered one hour later than the other days, this has a far greater impact on the average deliverance time compared to someone monitoring the deliverance for three weeks and one deliverance varies one hour with the others. Due to these disproportional variances, the sample of orchestras is not fully representative for the professional Dutch symphony orchestras; especially since substantial differences between the orchestras were found. Hence, the external validity of this research is not very strong.

The Cultuurnotas, being the official documents representing the Dutch cultural policies for the period prescribed, can be considered representative for the cultural policies of that period. The relation between the arts sector and the government is subject to the Zeitgeist and political inconstancies as the historical overview given in chapter 1 illustrated. Hence, the results of this research should not be projected on other eras.

It may prove worthwhile to test whether the words chosen to represent the priorities of the government and the words used creating the construct variables do measure the same priorities. This could for example be done by conducting a more advanced word counting method or by including comparing word counts of interviews and other documents on the subject that are published by the Ministry of Culture. This research has not tested the mutual correlation of the composed policy variables, nor has it checked if the words chosen do in fact represent the priorities as defined for this research; therefore the internal validity of the policy keywords is not very high.

10.3 Model extension

A possible cause of the limited explanatory power of the final model is the heterogeneity of the orchestra population, meaning the different qualitative characteristics of the orchestras, such as the

management, the corporate culture and the objectives of the orchestras.

Other areas of influence could be the conditions set by other subsidizing organizations, or sponsors the orchestras depend on.

Examples of variables that could improve the model are seasonality, flexibility, the programmer, orchestra objectives and other audience characteristics. These variables were not included due to a lack of required data. Also the definition of the variable Homebound may need to be reconsidered and affiliated subsidies may be included.

Seasonality represents the variation of the program between the high and low season within the cultural year; this can possibly be captured as the percentage of compositions also performed in another research period or the average number of months a composition is on the repertoire list.

The planning horizon, which is the time the program is set in advance can be used as a measure that reflects the possible flexibility of an orchestra in adjusting the program. Another plausible factor to be of influence on the program is the programmer; the fluctuation over time of the programmer who is responsible for the programming can be inserted to correct for changes in the programming behaviour due to this factor.

Special objectives of an orchestra may also influence the programming behaviour and therefore influence the extent of response to policy changes. This can include either restrictions related to the policy requirements, or requirements already surpassing the policy targets.

The definition of the variable Homebound can be reconsidered, not only including the city of residence, but all cities where subscription tickets are offered. This can neutralize one of the differences in characteristics of urban versus provincial orchestras, because the latter are mostly obliged to offer season tickets in the region, rather than only in their city of residence.

Inclusion of affiliated subsidies from local governments possibly shows the dependency more genuinely. If an extended model gives similar outcomes, it can be considered to extend the research with a qualitative component, including interviews with the general directors of the orchestras regarding their opinion about it.

Ideally more audience characteristics than only the size of the audience are taken into account, because they possibly reflect the popularity of an orchestra and their target group. Possible audience characteristics to include are the composition of the audience and the reach of the audience.

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Appendix A: Variables

(at chapter 6.5)

Independent variables: Policy

1. Subsidy

The variable Subsidy is a scale variable representing the amount of subsidy the government administers per orchestra per four year term. This variable is captured in one dimension, possibly constructed by two indicators.

Dimension1: Subsidy

Indicator 1: The absolute amount of euro's administered by the state per orchestra

2. Priorities

a. Dutch

The variable Dutch is a scale variable representing how much the government emphasizes on Dutch arts, in music mostly referring to Dutch composers and soloists. This variable is captured in one dimension, being the words *Nederlands* and *Nederlandse* in the Cultuurnotas, the adjective Dutch, this dimension is possibly constructed by three indicators.

Dimension 1: The number of times the words of all indicators are mentioned

Indicator 1: The number of times "Nederlands(e)" is mentioned

Dimension 2: The size of the paragraph on this subject, measured by the number of text lines

Dimension 3: The number of times any of the keywords from dimension 1 is mentioned in the preface or executive summary

b. Newness

The variable Newness is a scale variable representing how much the government emphasizes on new and innovating productions. This variable is captured in one dimension being the words in the Cultuurnotas with *nieuw*, the Dutch word of new, in it, such as *nieuwe* and *vernieuwend* etcetera. This dimension is possibly constructed by three indicators.

Dimension 1: The number of times the words of all indicators are mentioned

Indicator 1: The number of times "nieuw(e)" is mentioned

Dimension 2: The size of the paragraph on this subject, measured by the number of text lines

Dimension 3: The number of times any of the keywords from dimension 1 is mentioned in the preface or executive summary

c. Co-operation

The variable Co-operation is a scale variable representing how much the government emphasizes on co-operation with other cultural organizations. This variable is captured in three dimensions. The first dimension being all words in the Cultuurnotas starting with *samenwerk-* the radical of co-operating and co-operation in Dutch, *ondersteun-* the radical of support and supporting in Dutch and *divers-* the radical of diversity and the words *intercultureel* and *interculturele*, both meaning intercultural are being used.

Dimension 1: The number of times the words of all indicators are mentioned

Indicator 1: The number of times "samenwerk-" is mentioned

Indicator 2: The number of times "ondersteun-" is mentioned

Indicator 3: The number of times "divers-" is mentioned

Indicator 4: The number of times "intercultureel" is mentioned

Indicator 5: The number of times "interculturele" is mentioned

Dimension 2: The size of the paragraph on this subject, measured by the number of text lines

Dimension 3: The number of times any of the keywords from indicator 1 is mentioned in the preface or executive summary

d. Education

The variable Education is a scale variable representing how much the government emphasizes on cultural education. This variable is captured in three dimensions. The first dimension being the words *educatie*, and *onderwijs* which are the Dutch words for education, the words referring to youngsters, being. "*jongere(n)*", the Dutch word for youngsters, the word *publiek* and all words derived from it, such as *publieksbereik*, which is the audiences reach and all words with *activiteit-* in it, the Dutch word for activity.

Dimension 1: The number of times the words of all indicators are mentioned

Indicator 1: The number of times "educatie" is mentioned

Indicator 2: The number of times "onderwijs" is mentioned

Indicator 3: The number of times "jongere(n)" is mentioned

Indicator 4: The number of times "publiek" is mentioned

Indicator 5: The number of times "activiteit" is mentioned

- Dimension 2: The size of the paragraph on this subject, measured by the number of text lines
- Dimension 3: The number of times any of the keywords from dimension 1 is mentioned in the preface or executive summary

e. Coverage area

The variable Coverage area is a scale variable representing how much the government emphasizes on the coverage area of cultural organizations. This variable is captured in three dimensions. The first dimension being the words *cultuurbereik* which is the Dutch word for cultural range, and the words *internationale* and *internationaal*, both meaning international

Dimension 1: The number of times the words of all indicators are mentioned

Indicator 1: The number of times " *cultuurbereik*" is mentioned

Indicator 1: The number of times "*internationale*" is mentioned

Indicator 1: The number of times "*internationaal*" is mentioned

Dimension 2: The size of the paragraph on this subject, measured by the number of text lines

Dimension 3: The number of times any of the keywords from dimension 1 is mentioned in the preface or executive summary

Dependent variables: Orchestra programming

A. Imposed Deliverables

The variable Imposed Deliverables is a scale variable representing all programming aspects that correspond with the preferences of the government that are included in the model of this research. This variable is captured in one dimension, possibly captured in two indicators.

Dimension 1: Imposed deliverables

Indicator 1: The amount of imposed deliverables as a total number

Indicator 2: The percentage of all performances that comprises Imposed Deliverables.

B. Dutch Composers

The variable Dutch Composers is a scale variable representing the interest of the orchestra in Dutch Composers. This variable is captured in one dimension which is the individual performance, possibly constructed by three indicators.

Dimension 1: Performances

Indicator 1: The number of performances of pieces by Dutch composers as a percentage of the total amount of pieces programmed

Indicator 2: The number of concerts with at least one piece of a Dutch composer as a percentage of the total amount of concerts performed

C. Contemporary Music

The variable Contemporary Music is a scale variable representing the interest of the orchestra in Contemporary Music. This variable is captured in one dimension which is the individual performance, possibly constructed by three indicators.

Dimension 1: Performances

Indicator 1: **The number of performances of contemporary compositions as a percentage of the total amount of pieces programmed**

Indicator 2: The number of concerts with at least one contemporary composition as a percentage of the total amount of concerts performed

D. Co-operations

The variable Co-operations is a scale variable representing the co-productions with other creative organizations. Soloists are not considered to be an organization and are therefore not included. This variable is captured in one dimension which is the co-productions, possibly constructed by two indicators.

Dimension 1: Co-productions

Indicator 1: The total number of co-productions as a percentage of the total number of productions

Indicator 2: The number of performances that are (partly) co-productions as a percentage of the total amount of performances

E. Education

The variable Education is a scale variable representing the concerts and projects with educational purpose. This variable is captured in two dimensions; these are the educational projects and the youth concerts. Each of these dimensions is possibly constructed by one indicator.

Dimension 1: Educational projects

Indicator 1: The amount of educational projects as a percentage of the total amount of projects

Dimension 2: Youth concerts

Indicator 1: The amount of concerts dedicated to young audiences

F. International:

Dimension 1: Audience numbers

Indicator 1: The total number of audience members outside the Netherlands

Indicator 2: The total number of audience members abroad as a percentage of all audience members

Indicator 3: The amount of International audience members at concerts performed in the Netherlands as a percentage of all audience members

Dimension 2: Concerts

Indicator 1: Total number of concerts outside the Netherlands

Indicator 2: Total number of concerts outside the Netherlands as a percentage of the overall number of concerts

Control variables: Orchestra characteristics

1. Income volume

The control variable income volume is a scale variable and is captured in one dimension, being the total income, including subsidies, sponsoring and own income.

Dimension 1: The total income

Indicator 1: All income, including subsidies, sponsoring and own income

2. Income ratio

The control variable income ratio is a scale variable and expresses the amount of non-state-subsidy income as a percentage of the total income of year.

Dimension 1: Total Income

Indicator 1: The amount of non-state-subsidy income as a percentage of the total income

3. Homebound

The control variable Homebound is a scale variable representing the rate of concerts performed in residence. This control variable is captured in one dimension which is the residence, possibly constructed by two indicators.

Dimension 1: Concerts in residence

Indicator 1: The number of concerts played in residence as a percentage of all concerts performed

Dimension 2: Audience members in residence

Indicator 1: The number of audience members at concerts in residence as a percentage of all audience numbers.

4. Audience

The control variable Audience is a scale variable representing the audience characteristics. This control variable is captured in three dimensions, the number of audience members, the audience composition and the reach of audience members. Each of these dimensions is possibly constructed by one indicator.

Dimension 1: Audience

Indicator 1: The total amount of audience members

Dimension 2: Audience composition

Indicator 1: The number of youngsters, audience members under 30 years of age, as a percentage of the total audience

Dimension 3: The reach of audience

Indicator 1: Distance audience members travel to attend a concert

Appendix B: Tables and Graphs

(at chapter 7.2)

Descriptive statistics

At fig. 7a Income volume

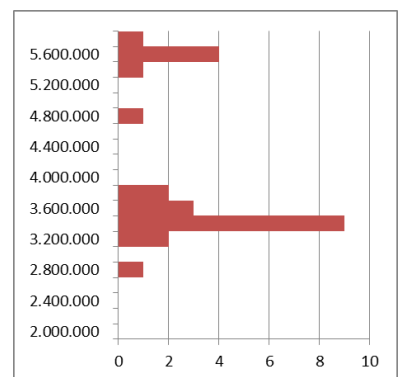
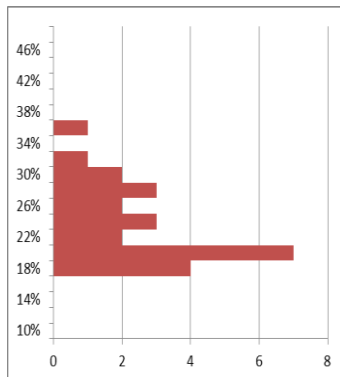
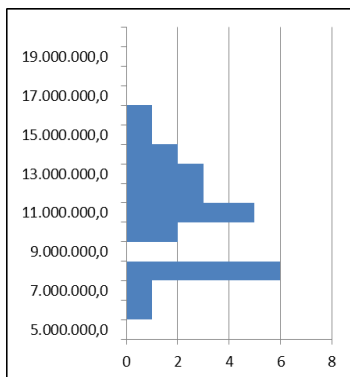
data_IF_Income_volume	
Minimum	5.980.233,000
Maximum	15.102.216,000
Average	10.251.475,960
St.dev.	2.615.026,810
Magnitude	1.000.000,0
Scale	200.000,0
Histogram	5.000.000,0 -
	5.200.000,0 -
	5.400.000,0 -
	5.600.000,0 -
	5.800.000,0 -
	6.000.000,0 1
	6.200.000,0 -
	6.400.000,0 -
	6.600.000,0 -
	6.800.000,0 1
	7.000.000,0 0
	7.200.000,0 3
	7.400.000,0 0
	7.600.000,0 1
	7.800.000,0 2
	8.000.000,0 0
	8.200.000,0 0
	8.400.000,0 0
	8.600.000,0 0
	8.800.000,0 0

At fig. 7b Ratio independent income

data_IF_Income_ratio	
Minimum	0,164
Maximum	0,346
Average	0,228
St.dev.	0,050
Magnitude	0,10
Scale	0,02
Histogram	0,100 -
	0,120 -
	0,140 -
	0,160 -
	0,180 4
	0,200 7
	0,220 2
	0,240 3
	0,260 2
	0,280 3
	0,300 2
	0,320 1
	0,340 0
	0,360 1
	0,380 0
	0,400 0
	0,420 0
	0,440 0
	0,460 0
	0,480 0

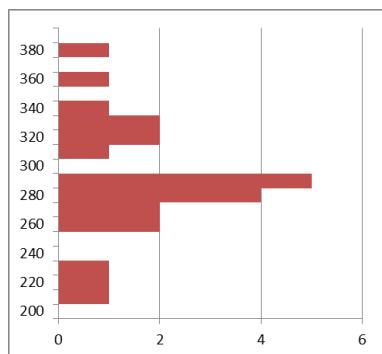
At fig. 7c Amount of subsidy

data_GF_Subsidy	
Minimum	2.793.000
Maximum	5.825.433
Average	4.007.356
St.dev.	1.019.815
Magnitude	1.000.000
Scale	200.000
Histogram	2.000.000 -
	2.200.000 -
	2.400.000 -
	2.600.000 -
	2.800.000 1,00
	3.000.000 -
	3.200.000 2,00
	3.400.000 9,00
	3.600.000 3,00
	3.800.000 2,00
	4.000.000 -
	4.200.000 -
	4.400.000 -
	4.600.000 -
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	5.400.000 1,00
	5.600.000 4,00
	5.800.000 1,00



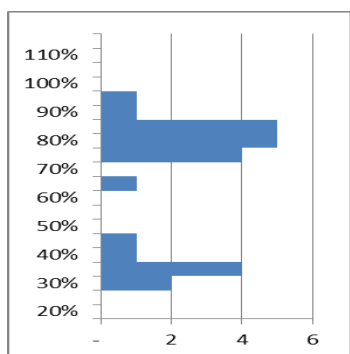
At figure 8 Pieces performed per year

data_total_performances		
Minimum	201,000	
Maximum	395,000	
Average	290,920	
St.dev.	46,286	
Magnitude	100,0	
Scale	10,0	
Histogram	200,0	-
	210,0	1
	220,0	1
	230,0	1
	240,0	-
	250,0	-
	260,0	2
	270,0	2
	280,0	4
	290,0	5
	300,0	0
	310,0	1
	320,0	2
	330,0	2
	340,0	1
	350,0	0
	360,0	1
	370,0	0
	380,0	1
	390,0	0



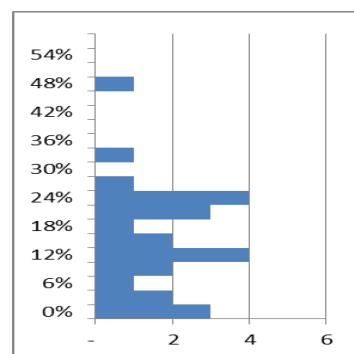
At fig. 9 Performances in residence

data_IC_Homebound		
Minimum	0,089	
Maximum	28,273	
Average	1,903	
St.dev.	5,712	
Magnitude	0,010	
Scale	0,050	
Histogram	0,080	-
	0,130	2
	0,180	3
	0,230	-
	0,280	3
	0,330	1
	0,380	2
	0,430	1
	0,480	2
	0,530	2
	0,580	2
	0,630	0
	0,680	1
	0,730	0
	0,780	1
	0,830	0
	0,880	0
	0,930	0
	0,980	0
	1,030	0



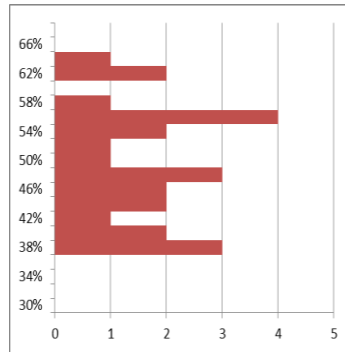
At fig. 10 Performances abroad

data_OA_International		
Minimum	-	
Maximum	0,478	
Average	0,146	
St.dev.	0,113	
Magnitude	0,010	
Scale	0,0300	
Histogram	-	3
	0,0300	2
	0,0600	1
	0,0900	2
	0,1200	4
	0,1500	2
	0,1800	1
	0,2100	3
	0,2400	4
	0,2700	1
	0,3000	0
	0,3300	1
	0,3600	0
	0,3900	0
	0,4200	0
	0,4500	0
	0,4800	1
	0,5100	0
	0,5400	0
	0,5700	0



At fig. 11 Deliverables ratio

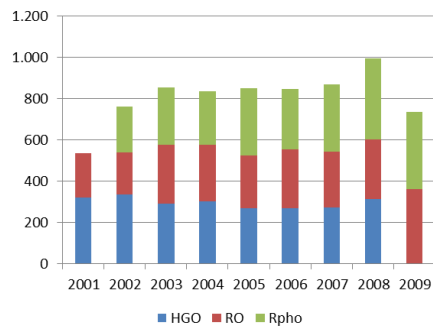
data_OF_Deliverables_ratio	
Minimum	0,372
Maximum	0,638
Average	0,487
St.dev.	0,079
Magnitude	0,10
Scale	0,02
Histogram	0,3000 -
	0,3200 -
	0,3400 -
	0,3600 -
	0,3800 3
	0,4000 2
	0,4200 1
	0,4400 2
	0,4600 2
	0,4800 3
	0,5000 1
	0,5200 1
	0,5400 2
	0,5600 4
	0,5800 1
	0,6000 0
	0,6200 2
	0,6400 1
	0,6600 0
	0,6800 0



Trends and comparisons

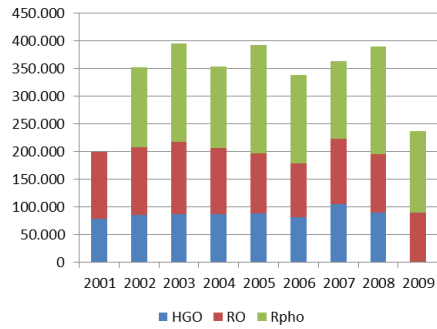
At fig. 13 Number of performances

data_Total_Performances			
	HGO	RO	Rpho
2001	319	215	0
2002	337	201	224
2003	290	286	278
2004	303	274	257
2005	268	256	324
2006	267	288	289
2007	273	271	322
2008	312	288	395
2009	0	360	376



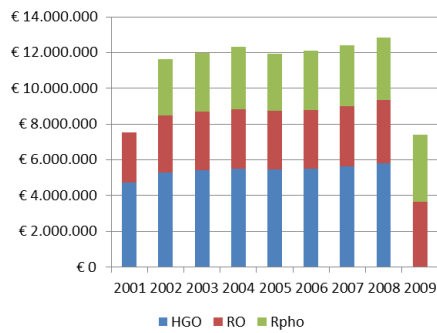
At fig. 14 Audience numbers

data_IA_Audience			
	HGO	RO	Rpho
2001	78279	120497	0
2002	85542	121916	144360
2003	87157	130347	177094
2004	86933	119324	146258
2005	88014	108792	195626
2006	81442	97596	158657
2007	104575	118767	139269
2008	89907	105570	193016
2009	0	89144	147830



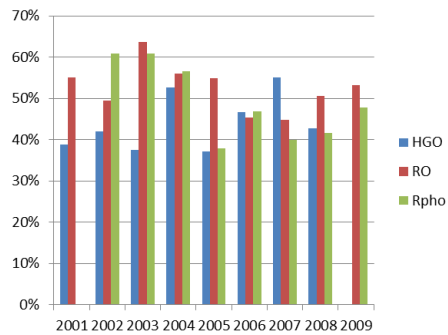
At fig. 15 Amount of subsidy

data_GF_Subsidy			
	HGO	RO	Rpho
2001	4734743	2793000	0
2002	5282914	3180000	3176304
2003	5437545	3273000	3269562
2004	5522748	3324000	3477828
2005	5449270	3277000	3230068
2006	5488680	3300000	3339986
2007	5631696	3386000	3382198
2008	5825433	3503000	3499141
2009	0	3665000	3734796



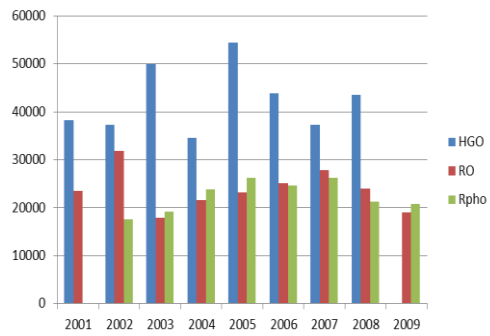
At fig. 16 deliverables ratio

data_OF_Deliverables_ratio			
	HGO	RO	Rpho
2001	0,3875	0,550926	0
2002	0,420118	0,49505	0,608108
2003	0,37457	0,637631	0,609319
2004	0,526316	0,56	0,565891
2005	0,371747	0,548638	0,378462
2006	0,466418	0,453287	0,468966
2007	0,551095	0,448529	0,399381
2008	0,426752	0,50519	0,416667
2009	0	0,531856	0,477454



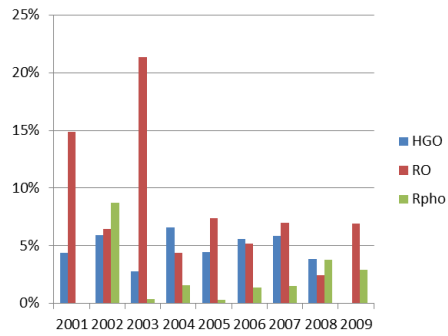
At fig. 17 Subsidy per imposed performance

	data_GF_Subsidy		
	data_OF_Deliverables_volume		
	HGO	RO	Rpho
2001	38183,41	23470,59	#DIV/0!
2002	37203,62	31800	17646,13
2003	49885,73	17885,25	19232,72
2004	34517,18	21584,42	23820,74
2005	54492,7	23241,13	26260,72
2006	43909,44	25190,84	24558,72
2007	37296	27754,1	26218,59
2008	43473,38	23993,15	21206,92
2009	#DIV/0!	19088,54	20748,87



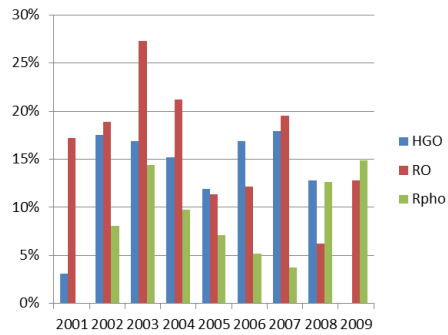
At fig. 18 Performances of Dutch compositions

data_OC_dutch			
	HGO	RO	Rpho
2001	0,043887	0,148837	0
2002	0,059347	0,064677	0,087054
2003	0,027586	0,213287	0,003597
2004	0,066007	0,043796	0,015564
2005	0,044776	0,074219	0,003086
2006	0,05618	0,052083	0,013841
2007	0,058608	0,070111	0,015528
2008	0,038462	0,024306	0,037975
2009	0	0,069444	0,029255



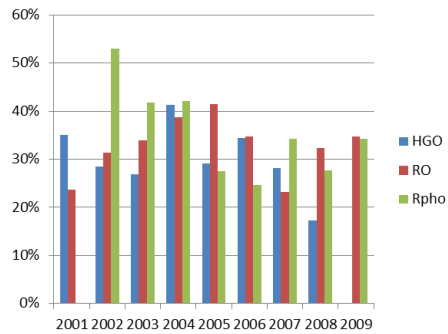
At fig. 19 Performances with co-productions

data_OC_coproduction			
	HGO	RO	Rpho
2001	0,031348	0,172093	0
2002	0,175074	0,189055	0,080357
2003	0,168966	0,272727	0,143885
2004	0,151815	0,211679	0,097276
2005	0,119403	0,113281	0,070988
2006	0,168539	0,121528	0,051903
2007	0,179487	0,195572	0,037267
2008	0,128205	0,0625	0,126582
2009	0	0,127778	0,148936



At fig. 20 Performances of contemporary music

data_OC_contemporary			
	HGO	RO	Rpho
2001	0,351097	0,237209	0
2002	0,284866	0,313433	0,529018
2003	0,268966	0,339161	0,417266
2004	0,412541	0,386861	0,420233
2005	0,291045	0,414063	0,274691
2006	0,344569	0,347222	0,245675
2007	0,282051	0,232472	0,341615
2008	0,173077	0,322917	0,275949
2009	0	0,347222	0,343085



Appendix C: Syntax

(at chapter 8)

Import data

GET DATA

/TYPE=XLS

/FILE='Dataset SPSS.xls'

/SHEET=name 'SPSS input'

/CELLRANGE=full

/READNAMES=on

/ASSUMEDSTRWIDTH=32767.

DATASET NAME Scriptie WINDOW=FRONT.

Start analyse

DATASET NAME Scriptie.

DATASET ACTIVATE Scriptie.

Prepare

* Create variable for the two policy periods:

RECODE Year (Lowest thru 2004=1) (2005 thru Highest=2) INTO Policy_period.

EXECUTE.

Preliminary checks

* Check for normality of dependent and independent variables

using Kolmogorov-Smirnov test for normality and Shapiro-Wilk test for normality of small samples

* Non-parametric test

EXAMINE VARIABLES GF_Subsidy IF_Income_volume IF_Income_ratio IF_Performances OF_Deliverables_ratio

OC_All OA_All /PLOT=NPLOT.

* For illustrative purposes:

GRAPH

/HISTOGRAM=GF_Subsidy.

GRAPH
/HISTOGRAM= IF_Income_Ratio.

GRAPH
/HISTOGRAM= OF_Deliverables_Ratio.

Hypothese 1

* Graph to illustrate relation between Deliverable variables:

GRAPH
/SCATTERPLOT(BIVAR)=OF_Deliverables_volume WITH OF_Deliverables_ratio BY Orchestra (IDENTIFY)
/MISSING=LISTWISE
/TITLE='Imposed performances in % of total performances and in absolute amount'.

CORRELATIONS
/VARIABLES=OF_Deliverables_volume OF_Deliverables_ratio
/PRINT=TWOTAIL NOSIG
/MISSING=LISTWISE.

* Graph to illustrate relation between Income variables:

GRAPH
/SCATTERPLOT(BIVAR)=IF_Income_Volume WITH IF_Income_Ratio BY Orchestra (IDENTIFY)
/MISSING=LISTWISE
/TITLE='Absolute income and other income as % of total income'.

CORRELATIONS
/VARIABLES=IF_Income_Volume IF_Income_Ratio
/PRINT= TWOTAIL NOSIG
/MISSING=PAIRWISE.

* H1a - Absolute amount of subsidy on absolute income and non-subsidy ratio

* Parametric test

CORRELATIONS
/VARIABLES=GF_Subsidy IF_Income_Volume IF_Income_Ratio
/PRINT= TWOTAIL NOSIG
/MISSING=PAIRWISE.

* Non-parametric test

NONPAR CORR
/VARIABLES=GF_Subsidy IF_Income_Volume IF_Income_Ratio
/PRINT= SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

* H1b - Absolute amount of income as absolute number and non-subsidy ratio
on imposed deliverables absolute number and as ratio

* Parametric test

CORRELATIONS

/VARIABLES=IF_Income_Volume IF_Income_Ratio OF_Deliverables_Volume OF_Deliverables_Ratio

/PRINT= TWOTAIL NOSIG

/MISSING=PAIRWISE.

* Non-parametric test

NONPAR CORR

/VARIABLES=IF_Income_Volume IF_Income_Ratio OF_Deliverables_Volume OF_Deliverables_Ratio

/PRINT= SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

* H1 - Absolute amount of subsidy on imposed deliverables absolute number and as ratio,

* Parametric test

CORRELATIONS

/VARIABLES=GF_Subsidy OF_Deliverables_volume OF_Deliverables_ratio

/PRINT=TWOTAIL NOSIG

/MISSING=LISTWISE.

* H1 - Absolute amount of subsidy on imposed deliverables absolute number and as ratio,
then controlled for income as absolute volume and as independence ratio

* Parametric test

PARTIAL CORR

/VARIABLES=GF_Subsidy OF_Deliverables_volume BY IF_Income_volume

/SIGNIFICANCE=TWOTAIL

/MISSING=LISTWISE.

PARTIAL CORR

/VARIABLES=GF_Subsidy OF_Deliverables_ratio BY IF_Income_ratio

/SIGNIFICANCE=TWOTAIL

/MISSING=LISTWISE.

Hypothese 2

* H2 - Policy keywords on imposed performances as ratio

* Create overall variables GC_All and OC_All

COMPUTE GC_All=GC_Dutch+GC_Innovation+GC_Cooperation.


```
COMPUTE OC_All=OC_Dutch+OC_Contemporary+OC_Coproductio.
EXECUTE.
```

- * Parametric test
- * Policy_period is dichotomous, so, first, T-test is used:

```
T-TEST GROUPS=Policy_period(1 2)
/MISSING=ANALYSIS
/VARIABLES=OC_All
/CRITERIA=CI(.95).
```

- * Correlation of number of keywords with number of imposed performances as ratio:

```
CORRELATIONS
/VARIABLES=GC_All OC_All
/PRINT=TWOTAIL NOSIG
/MISSING=LISTWISE.
```

- * Graph to illustrate differences:

```
GRAPH
/SCATTERPLOT(BIVAR)=GC_All WITH OC_All BY Orchestra (IDENTIFY)
/MISSING=LISTWISE
/TITLE='Imposed performances as % of total performances as a result of policy emphasis'.
```

- * H2.1 - Policy keywords for Dutch composers on imposed performances with Dutch composers as ratio
- * Parametric test

```
T-TEST GROUPS=Policy_period(1 2)
/MISSING=ANALYSIS
/VARIABLES=OC_Dutch
/CRITERIA=CI(.95).
```

- * Correlation of number of keywords for Dutch composers with number of imposed performances with Dutch composers as ratio:

```
CORRELATIONS
/VARIABLES=GC_Dutch OC_Dutch
/PRINT=TWOTAIL NOSIG
/MISSING=LISTWISE.
```

- * H2.2 - Policy keywords for Innovation on imposed innovative performances as ratio
- * Parametric test

```
T-TEST GROUPS=Policy_period(1 2)
/MISSING=ANALYSIS
/VARIABLES=OC_Contemporary
/CRITERIA=CI(.95).
```

* Correlation of number of keywords for innovative programming with number of imposed innovative performances as ratio:

* H2.2a and 2.2b: check for covariate in number of home-played performances as ratio:

CORRELATIONS

```
/VARIABLES=GC_Innovation IC_Homebound OC_Contemporary  
/PRINT=TWOTAIL NOSIG  
/MISSING=LISTWISE.
```

* Idem, corrected for covariate ratio of home-played performances:

PARTIAL CORR

```
/VARIABLES=GC_Innovation OC_Contemporary BY IC_Homebound  
/SIGNIFICANCE=TWOTAIL  
/MISSING=LISTWISE.
```

* H2.3 - Policy keywords for Cooperation on imposed cooperative performances as ratio

* Parametric test

T-TEST GROUPS=Policy_period(1 2)

```
/MISSING=ANALYSIS  
/VARIABLES=OC_Coproduction  
/CRITERIA=CI(.95).
```

* Correlation of number of keywords for innovative programming with number of imposed innovative performances as ratio:

* H2.2a and 2.2b: check for covariate in number of home-played performances as ratio:

CORRELATIONS

```
/VARIABLES=GC_Cooperation IC_Homebound OC_Coproduction  
/PRINT=TWOTAIL NOSIG  
/MISSING=LISTWISE.
```

* Idem, corrected for covariate ratio of home-played performances:

PARTIAL CORR

```
/VARIABLES=GC_Cooperation OC_Coproduction BY IC_Homebound  
/SIGNIFICANCE=TWOTAIL  
/MISSING=LISTWISE.
```

Hypothese 3

* H3 - Policy keywords on imposed performances as ratio

* Create overall variables GA_All and OA_All

```
COMPUTE G_All=GC_All+GA_All.  
COMPUTE GA_All=GA_Education+GA_Domain.  
COMPUTE OA_All=OA_Educational+OA_International.  
EXECUTE.
```

* Parametric test

```
T-TEST GROUPS=Policy_period(1 2)  
/MISSING=ANALYSIS  
/VARIABLES=OA_All  
/CRITERIA=CI(.95).
```

* Correlation of number of keywords with number of imposed performances as ratio:

```
CORRELATIONS  
/VARIABLES=GA_All OA_All  
/PRINT=TWOTAIL NOSIG  
/MISSING=LISTWISE.
```

* Graph to illustrate differences:

```
GRAPH  
/SCATTERPLOT(BIVAR)=GA_All WITH OA_All BY Orchestra (IDENTIFY)  
/MISSING=LISTWISE  
/TITLE='Imposed performances as % of total performances as a result of policy emphasis'.
```

* H3.1 - Policy keywords for Education on imposed educational performances as ratio

* Parametric test

```
T-TEST GROUPS=Policy_period(1 2)  
/MISSING=ANALYSIS  
/VARIABLES=OA_Educational  
/CRITERIA=CI(.95).
```

* Correlation of number of keywords for Education with number of imposed educational performances as ratio:

* H3.1a and 3.1b: check for covariate in size of audience:

```
CORRELATIONS  
/VARIABLES=GA_Education OA_Educational IA_Audience  
/PRINT=TWOTAIL NOSIG  
/MISSING=LISTWISE.
```

* Idem, corrected for covariate ratio of home-played performances:

```
PARTIAL CORR  
/VARIABLES=GA_Education OA_Educational BY IA_Audience  
/SIGNIFICANCE=TWOTAIL
```

/MISSING=LISTWISE.

- * H3.2 - Policy keywords for Domain on imposed international performances as ratio
- * Parametric test

T-TEST GROUPS=Policy_period(1 2)
/MISSING=ANALYSIS
/VARIABLES=OA_International
/CRITERIA=CI(.95).

- * Correlation of number of keywords for Domain with number of imposed international performances as ratio:
- * H3.2a and 3.2b: check for covariate in size of audience:

CORRELATIONS

/VARIABLES=GA_Domain OA_International IA_Audience
/PRINT=TWOTAIL NOSIG
/MISSING=LISTWISE.

- * Idem, corrected for covariate audiences:

PARTIAL CORR

/VARIABLES=GA_Domain OA_International BY IA_Audience
/SIGNIFICANCE=TWOTAIL
/MISSING=LISTWISE.

Final test

- * G_All (=GC_All + GA_All) and Subsidy on Imposed deliverables (ratio) (=OC_All + OA_All), corrected for Independent Income (ratio).
- * Stepwise regression analysis, illustrating standardized residual on dependent variable
- * Removing variable on significance 0.10, IF_Income_ratio was removed,

REGRESSION

/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA CHANGE COLLIN
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT OF_Deliverables_ratio
/METHOD=BACKWARD GF_Subsidy G_All IF_Income_ratio
/SCATTERPLOT=(*RESID ,OF_Deliverables_ratio)
/RESIDUALS HISTOGRAM(RESID) NORMPROB(RESID)
/SAVE ZRESID RESID.

- * K-S and S-W tests for normality of residuals,

EXAMINE VARIABLES RES_1 ZRE_1 /PLOT=NPLOT.