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# **MEASURING PUBLIC ENTREPRENEURSHIP OF QUANGOS**

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## Measuring Public Entrepreneurship of Quangos

Peter Friedrich, Kadri Ukrainski\*

### Abstract

Quangos and public entrepreneurship are closely related. The economic theory of quangos allows us to develop a quango theory and highlight the effects of public entrepreneurship. By considering principal agent relations we show how public entrepreneurship of government and quango influence each other in the framework of vertical competition. Also horizontal competition between a quango and other quangos as well as to private enterprises influences the political entrepreneurship. Reference is made to a duopoly model for a competing quango of version 2. Considering the measurement of success of political entrepreneurship, we find that when it is related to increasing output the output development of the quangos may be used as measure of public entrepreneurship success which is relatively high in case of output maximising management. With other types of management the success turns out lower. If the political success is measured by effects of quango on third parties additional difficulties arise. A model of voters reactions on quango production within a model of public sector shows measurement of public political and public quango entrepreneurship and the budgets which result from these entrepreneurships. As there is no satisfying effect measurement models for quangos, which are empirically verified. Moreover, no social welfare function or a general social indicator function is available. Also social success in the sense of welfare maximisation by benefit-cost measurement through willingness to pay measurement is not applicable. Therefore, the success should be measured at the quango level by application of output oriented criteria. Examples from Germany and Estonia show chances and limits of public entrepreneurship within and through quangos.

**JEL Classification:** L32, L33, D73, H83

**Keywords:** Quango, public office, public enterprise, vertical competition, horizontal competition, entrepreneurship, public management, success measurement

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## 1. INTRODUCTION

Today the term quango is used notably in the UK, Ireland, Australia and elsewhere to colloquially label an organisation to which government has devolved power. In the United Kingdom the official term is ‘non-departmental public body’ (NDPB). Quangos fulfil the tasks of governments at EU level (European quango; European Regulation, 2005), central government, federal or national level (quango), state level or municipal level (qualgo). A quango is “*A body which has a role in the processes of national government, but is not a government department or part of one, and which accordingly operates to a greater or lesser extent at arm's length from Ministers*” (Cabinet office, 1997). All quangos develop due to different forms of European cooperation, different systems of public and private law in European member states, decentralisation policies (Kuhlmann, 2006), new tasks and new forms of public management (et al., 2002: 719–720) that separate policy from operational tasks and allocate them to different types of organisations to achieve what is known as agencification.<sup>1</sup>

Sometimes the expression ‘quango’ is used for institutions in public law and sometimes for those existing in some form of private law (Schubert, Klein, 2006). In some countries, such as Holland, Denmark and Germany, among others, quangos appear in private and public law (Bogumil, 2007) or institutions can be identified that are quangos. They also exist in Germany and appear in some form of private or public law. One finds them in other European countries, such as the Netherlands (Verschuere, 2006), Sweden, Estonia (Kattel, Suurna, 2008) and others. The debate concerning quangos focuses mainly on their definition, their scope of autonomy and whether they fit the responsibility of governments and the respective parliaments of jurisdictions. There have been only a few attempts (Friedrich, Ukrainski, 2011a, 2011b) to integrate them into micro-economic theory; however these are not much related to entrepreneurship. Therefore, we try to analyse the relation between quangos and entrepreneurship leading to the following research questions:

- How is public entrepreneurship defined and are quangos new organizations pointing to a kind of public entrepreneurship?
- How do quangos perform as an economic unit and react to economic changes?
- How are they integrated in economic coordination?
- What are the limits and chances of quangos to enforce entrepreneurship?

In the second section we discuss which forms of public entrepreneurship may fit, the third and fourth sections are devoted to the integration of quangos in economic theory and the last sections deal with two quango examples, one from Germany in public real estate management and the other one from Estonia in the field of biotechnology.

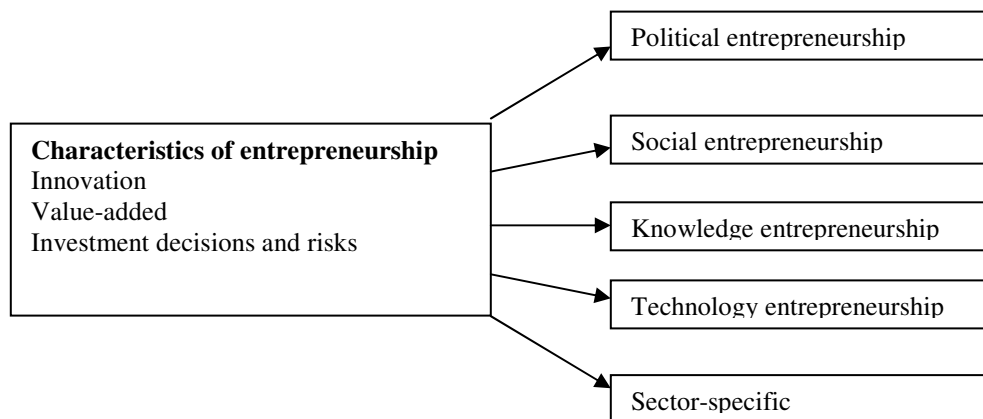
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<sup>1</sup> In the UK they are also known as next step agencies. Especially in the UK there exist about 1,162 quangos with a budget of approximately £64 billion (The taxpayers alliance, 1997). A trend exists to shift competences from local government to central state quangos (Kuhlmann, 2006). In Ireland there are approximately 800 quangos (482 at national level and 350 at local level) with a budget of about €13 billion (Focus:..., 2006). At EU level there are at least 30 quangos (Bach, Hustedt, 2008).

## 2. DEFINITIONS OF INNOVATION, PUBLIC ENTREPRENEURSHIP AND QUANGOS

Often entrepreneurship definitions offered in literature are rather vague and sometimes characterizing this phenomenon via other vague definitions, such as *innovation*.<sup>2</sup> Entrepreneurship refers to an actor who recognizes entrepreneurial (profit) opportunities, undertakes (moderately risky) investment decisions with a view to innovating, and takes action by using resources to implement a differentiated vision that adds value (Filion, 2011: 49). The scope of innovation in public sector comprises, for example, introduction of new policy proposals, political positions or paradigms, introduction of new procedures, changing administrative and electoral procedures (Klein et al., 2010). The value added concerns the change in preferences, goals, problems, and the avoidance of undesirable outcomes.

Another feature of entrepreneurship is related to the ability of an actor to make *decisions on investments under uncertainty* (Knight, 1921). It concerns decisions of a public actor on investments to meet political or public objectives, on evaluating the appropriateness of various policies, on negotiating activities and strategies in conflict and coordination (Klein et al., 2010). With public entrepreneurship the actor is a public manager (politician, administrator, manager in a public firm) or a public economic unit. The word public expresses that public entrepreneurship is to pursue goals in the public interest.



**Figure 1.** Features of public entrepreneurship (Authors' compilation)

The public sector comprises public offices and public enterprises. Public entrepreneurship deals in macroeconomic terms with the public sector and its relation to and coordination with other sectors, e.g. the private sector and the foreign sector. In microeconomic analysis entrepreneurship refers to single economic units such as public offices, public enterprises and their microeconomic coordination with private economic units and with other public units (Eichhorn, Friedrich, 1976). The interpretation just mentioned shows that public entrepreneurship deals with the coordination of private and/or public actors to achieve public goals, the formulation of tasks and goals, the

<sup>2</sup> Innovation is not a recently conceptualised phenomenon, being originally formed by Schumpeter in 1911 (published, 1934).

design and development of public organisations, the ways of management of resources, and the control of external effect (Klein et al., 2010). From the point of discussing quangos, we can introduce the specific public entrepreneurship here as well, such as political, social, knowledge, technical, and sector specific. The list in Figure 1 is not exhaustive but indicative.

*Social entrepreneurship* shows an actor who acts for the public benefit in an innovative way.<sup>3</sup> A public social entrepreneurship is specified if the actor is a public office or a public enterprise and that is acting in the public benefit especially to achieve social and environmental goals, such as creating new forms of homes and treatments for elderly people, to assist the poor, to improve health, to educate socially acceptable behaviour, etc. Public social entrepreneurship relates to a broad field of public social tasks.

*Political entrepreneurship* is defined as promoting political innovations (Schnellenbach, 2007). It refers to new types of cooperation, decision making in society and decision bodies, revolutions and promoting new tasks. Public political entrepreneurship deals with such changes by public actors concerning activities in the public sector but also in relation to the private ones.<sup>4</sup>

*Knowledge entrepreneurship* deals with innovations in knowledge creation, knowledge distribution and application. The knowledge can refer to new insights, research results, products concerning knowledge and knowledge education and application and knowledge needs for the future. When the actor is public we are confronted with activities that deal with science, education, knowledge application and enforcement of knowledge transfer and exchange.

The definition of *technology entrepreneurship*<sup>5</sup> can be applied to public actors as well. A public actor does innovation to achieve public goals related to advances in scientific and technological knowledge, such as technical production processes, new goods and findings, and knowledge transfer by universities, colleges, research institutes, use and developing specific knowledge in public offices and public enterprises in various administrative sectors. Then it is part of *public sector oriented entrepreneurship* such as in the military sector, health sector, transportation, communication, informatics, insurance, banking, internal security sectors, agriculture, forestry, environmental preservation and protection, energy, development of law and justice, etc.

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<sup>3</sup> Discussions on social entrepreneurship have been taken place under the heading of “gemeinwirtschaftliche Unternehmen” or “Gemeinwirtschaftlichkeit” in Central Europe for over 100 years.

<sup>4</sup> Roberts and King (1989) consider public entrepreneurs as persons who introduce and implement new ideas to the public sector. They discuss policy, bureaucratic, executive, and political entrepreneurs. Policy entrepreneurs are entrepreneurial persons outside the formal positions of government bringing new ideas into the public sector. Bureaucratic entrepreneurs are non-leadership officials in government, executive entrepreneurs work in the leading positions in governmental agencies and departments, while political entrepreneurs introduce and implement new ideas as holders of elective office. In the case of quangos we focus mostly bureaucratic and executive entrepreneurs who have an administrative responsibility, although it is difficult to distinguish those types in practice.

<sup>5</sup> “An investment in a project that assembles and deploys specialized individuals and heterogeneous assets that are intricately related to advances in scientific and technological knowledge for the purpose of creating and capturing value for a firm” (Bailetti 2012).

**Table 1.** Quango criteria (Authors' compilation)

Criteria	Quango-relevant	Not quango-relevant	
Legal criteria	a) Legal personality	Legal partly dependent or independent	Legal total dependent
	b) Legal forms	<i>Public law, own subject</i> (Public corporations and bodies, own subject public institutions, own subject public foundations, own subject partly legal dependent firms) <i>Private law, own subject</i> (Stock company, Limited company, Mixed forms, Associations, Cooperatives, Private foundations) <i>European law, own subject, private law</i> (Stock company, European cooperative, European interest grouping, European Territorial Interest Grouping, European Agency existing through European contractor regulation)	<i>Private law, own subject</i> (Commercial partnership, Sole proprietorship)
	c) Laws concerning task accomplishment	Public law	Private law
	d) Source of law		EU-contracts, Constitutional law, Federal (Central government), State law, Municipal law
	e) Service area		European, Federal (national), State-wide, Municipal
	f) Power function	Executive, Legislative, Judiciary	Executive, Legislative, Judiciary
	g) Administrative level	Higher or middle rank administration	Highest or low rank administration
	h) Tasks		Self-administration, Administration for other jurisdictions
Economic criteria	a) Dependence of government representatives	Binding in organs, Legal form	
	b) Property	Public and mixed public private property	Private property
	c) Subordination agreement	Existing (stated by law or not)	Not existing
	d) Interwoven organization	Existing	Not existing
	e) Fiscal dependency	Budget planning, Budget realization, Budget auditing	
	f) Finance	Own revenues, Loss and equity capital compensation, Finance PPP, Subsidization	Subsidization
	g) Public goals	Special public goals	General public interests goals
	h) Profit orientation	Non-profit, Profit	Non-profit, Profit
	i) Tax exemptions	By public law or tax law; Special social, educational, scientific goals; Pool profits or turnovers	Special social, educational, scientific goals; Pool profits or turnovers
	j) Goods produced	Public goods, supply side, Administrative sectors	Public goods, demand side, Administrative sectors
	k) Planning integration	Own planning	Central planning
	l) Market integration	Market monopoly, Market competition, Non-market monopoly, Non-market competition, Cluster member	Cluster member
	m) Location	One, Several	One, Several
	n) Production processes	Production processes and factors used	Production processes and factors used

Among several different concepts one can identify a narrow and a broad approach to quangos (see Friedrich, Ukrainski, 2011b), but also criteria for identifying quangos (Table 1).

According to Eichhorn, Friedrich (1976), a public economic unit belongs at least partly to a public owner and it produces services and goods to achieve public goals by combining production factors. They appear as public offices and public enterprises. To classify it as a quango it should not be totally integrated with all its revenues and expenditures into the budget of the owning jurisdiction otherwise it is a totally dominated gross administration classified as a public office. The quango appears with transfers (grants), compensations or part of the expenses in the budget of the owing body. Quangos have their own budget plan and own decision power with respect to individual revenues and expenditures and their own budget. Through the owner rights and responsibilities of the owner the quango underlies public monitoring and auditing with respect to monetary decisions and achievement of public goals. This is not the case with private firms or non-profit institutions where only the legal use of subsidies is checked. Therefore, the economic definition of quango dominantly conforms to that of a public enterprise. Sometimes public enterprises are not quangos, because they behave independently like private enterprises. To identify them, additional criteria become relevant such as the company law form, the degree of subordination and public influence on planning such as investments, debts, etc. However, for many economic analyses this quango definition seems appropriate as will be shown below.

According to our specification, a quango is a public actor itself and a new form of public organization which points to public entrepreneurship. They occur especially if the quangos are newly introduced to an existing *public management concept* or if they get introduced in the course of a management concept.<sup>6</sup> They might be implanted because a creative management of public resources (Klein et al., 2010) is intended. It seems questionable whether the quangos are a sign of public entrepreneurship in a management concept where already many agencies are in use, such as in the EU. Then one should turn to the *tasks* of the quango and identify whether they are new or traditional ones. In all the fields of different kinds of public entrepreneurship quangos could be found or used. As quangos possess more autonomy they might also attract entrepreneurial managers supporting the tendency of entrepreneurial behaviour within the quango and of the quango itself. With respect to quangos, a *chain of public entrepreneurship* might develop. The establishment of quango is related to political entrepreneurship. According to the tasks it might be of social, knowledge or technical or sector public entrepreneurship or develop to a kind of public quango entrepreneurship through the behaviour and decisions of the top managers of the quango.

### **3. THE MICROECONOMIC PLAN OF A QUANGO AND THE ROLE OF TYPES OF MANAGEMENT**

We model a quango in the microeconomic way and show here only the graphic version of the model.<sup>7</sup> The quango produces a good captured by a production function showing three production factors, a fixed factor, e.g. fixed capital, and two variable factors, labour and materials. It also receives some services from other governmental public offices. The management of the quango is

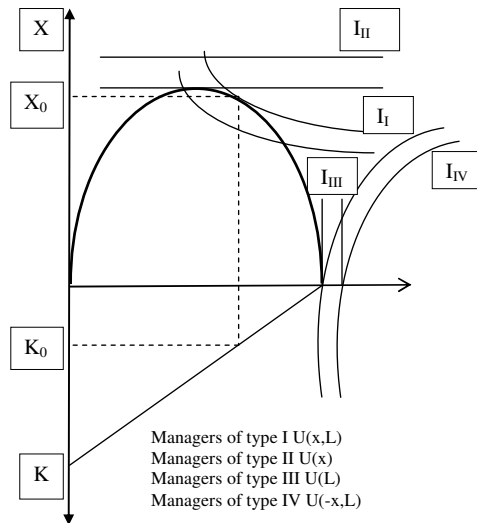
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<sup>6</sup> For example from a Harzburg concept, or management by objectives (Eichhorn, Friedrich 1976)

<sup>7</sup> A more detailed analytical version is given in Friedrich, Ukrainski (2011a).



interested in accomplishing public goals related to the output and to some extent its own goals that might be tied to labour input. This is expressed by a utility function of management. It also shows that management has the influence to shape the task performance. Therefore, it has a scope of autonomy necessary to be characterized as a quango. In the following analysis we assume two versions of quangos. The *first version of a quango* (hereinafter quango 1) shows a fixed budget, which can stem from own revenues such as taxes or contributions paid by members, or just by transfers and grants from a jurisdiction to which the quango belongs. However, the quango is free to buy necessary production factors whereas the pre-services of public offices get delivered free of charge but given in volume.



**Figure 2.** Management types of quango of version 1 (Authors' compilation)

In Figure 2, where capital and budget are fixed we reach the optimal solutions. The production activities are very much influenced by the evaluation and goals of the management. Management may be according to the different types of utility function: Type I maximises a combination of output and labour, type II maximises output, type III maximises labour, type IV maximises a combination of labour and output but dislikes output. These management types may serve as characterizing the public entrepreneurship of managers. Type II managers are very much interested in developing and using all possibilities of the quango to achieve public goals. Type I managers might also show public entrepreneurial behaviour; in addition they do not realize efficient outputs. If types III and IV prevail the quango may be a result of public entrepreneurship as such and it might offer very innovative services, but the management of the quango is not willing to follow an enforced public entrepreneurial management. Therefore, the quango may act efficiently if its management is of type II, less efficiently if it is of type I and very inefficiently being of type III or IV.<sup>8</sup>

<sup>8</sup> The inefficiency may lead with type I, III and IV management to own additional internal activities using the separation from the public offices under direct governmental control.

The *second quango version* (quango 2) receives revenues according to its activities, e.g. from fees, or service delivery dependent contributions. It is also a quango as it shows autonomy to determine the volume of output. The goals and aspirations of the management are considered by the formulation of a utility function of management. Such a model is shown in the Figure 3 based on Dehne et al., 2009; Feng, Friedrich (2000) and Friedrich, Ukrainski (2011a). The top left quadrant in the figure demonstrates the delivery conditions of the quango. For each volume of sale (for example, at output level A) the referring financial revenues (D) are generated that are used to cover costs. After deducting fixed cost  $C_A$ , a cash flow is available to finance variable costs. The so-called output-labour curve shown as a bold line in the top right quadrant illustrates all output labour combinations that can be financed.<sup>9</sup> One production (G) is material-intensive and the other (F) is labour-intensive. For alternative sales revenues and corresponding production volumes a set of output-labour curves and a set of relevant material-intensive and labour-intensive points result. Their connection leads to a production possibility frontier on the labour-output curve indicated as a thick curve in this quadrant. Introducing a set of indifference curves that correspond to the management utility function ( $I_I, I_{II}, I_{III}, I_{IV}$ ), the highest indifference curve that the management, e.g. of type I, can achieve touches the production possibility frontier on the output-labour curve at point F. This determines the optimal production volume M, the optimal price B and the optimal sales revenue D. Moreover, there is a path of tangency points between alternative possible output-labour curves, which correspond to alternative demand curves of the quango. They are related to the cost curves mentioned above ( $C_I, C_{II}, C_{III}, C_{IV}$ ).<sup>10</sup> As a consequence, different optimum fee levels emerge corresponding to the change of utility function from type I to III.

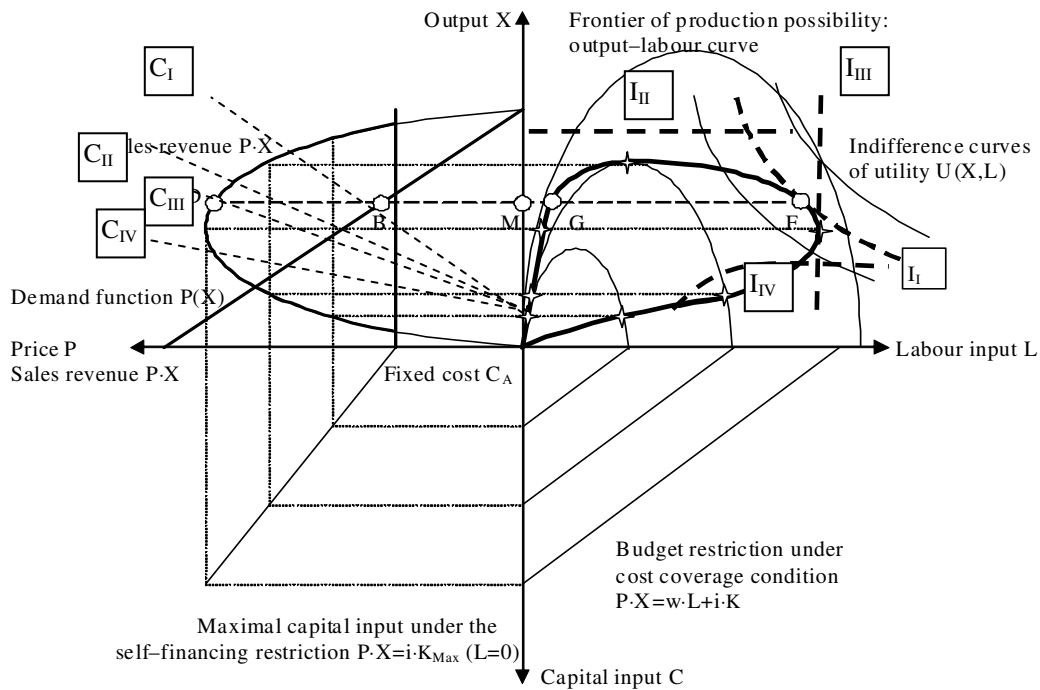
In *quango 1 many tools of management* may be explicitly shown.<sup>11</sup> Very important is for the management a budget increase as utility increases as well. Which management instrument should be used depends on the independence of the quango regarding the action parameters, especially in vertical relations to government. The type of management also points to the entrepreneurial

<sup>9</sup> Only one production volume X corresponds to each sales volume, therefore only two points on the output-labour curve (G and F) shown in the top right quadrant are relevant for the output level M.

<sup>10</sup> If the management utility function solely depends on output (i.e. with the horizontal type II utility function) and management chooses the cost-minimal factor combinations for production, it can realise its maximum output level and the corresponding (cost-minimising-path) cost function results, as the upper and the lower part of Figure 2 respectively shows. Utility functions depending on both output and labour (type I) lead to the cost paths more to the right of the minimal path in the bottom right hand quadrant in Figure 5. If the public firm attempts to maximise labour input (type III), then a path emerges which connects those tangency points near the respective maximal turnover volumes.

<sup>11</sup> A higher budget allowed, e.g. by allocating a higher budget, or by fixing higher output independent tax rates or contributions, moves the budget line and the output-labour curve of *quango 1* up and a higher output and employment as well as higher utility results. The governmental coordination measures may restrict labour input to force the management to a higher output (in Figure 3 if the restriction claims a lower labour input than the optimal one for type I, type II, type III). Also the structure of positions by grade and income may be considered (Friedrich, 1985) in such a model. This effect of an output increase can also be reached by requiring a higher output than the optimal one. The influence on the utility functions of management seems very important because type III and type IV always lead to solutions of poor task fulfilment. This can be done by restricting the evaluation space by the management, introducing the application of an imputed evaluation function or by ethic education of managers that they do not act selfish and turn into type II and I managers. Another management tool might be to regulate the production function or to specify the quality of the product by legal requirements. However, planned factor prices might be introduced, e.g. interest rate, material price, labours costs that the management has to consider.

development of the quango. Managers eager to develop the quango might be more of type I and II. Thus, using the resources nearly to the utmost possible extent they show higher public entrepreneurship within a deterministic environment.

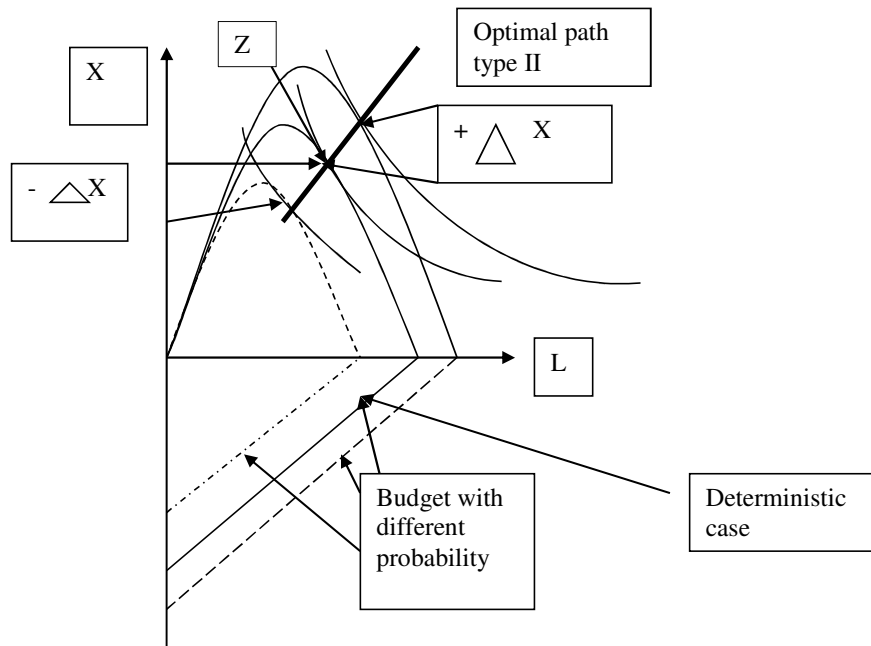


**Figure 3.** Quango solution (similar to Dehne et al., 2009)

The *quango 2* model points to *similar policies* to influence the quango management. One of the problems is that all rules that are cost oriented, such as marginal cost pricing or the commercial rules, refer to cost functions that are determined by the type of management. The solutions are always not favourable if type III or IV prevail. The demand situation might also be influenced by regulation concerning product quality (tasks) and changing delivery conditions by law. An additional policy of the owning jurisdiction might concern the budget. It may claim that a profit is achieved and transferred to the owner, e.g. an amount proportional to capital. Then the available budget for the managers is decreased. The output-labour curves move to the left and with type I to III management prices increase, while only type IV management would reduce the price. The utility of the management shrinks and outputs will be lowered with the exception of type IV managers. Again, the development of the quango is very much influenced by the type of management. Entrepreneurial type I and II managers may be interested in growth and active development of the quango and support the political and sector oriented public entrepreneurial policy.

This finding is also supported by introducing the *element of risk*. The simplest way is to introduce risks as related to the output and assuming that with higher output the risk increases. This again shows that type I and II managers are willing to prefer solutions that are more related to risks and are therefore more entrepreneurial, whereas type III and IV managers show the tendency to avoid risky outputs. Risk can also be considered in a further form. There might be risks in quango 1 concerning factor prices, the production techniques or about the budget provided. The budget

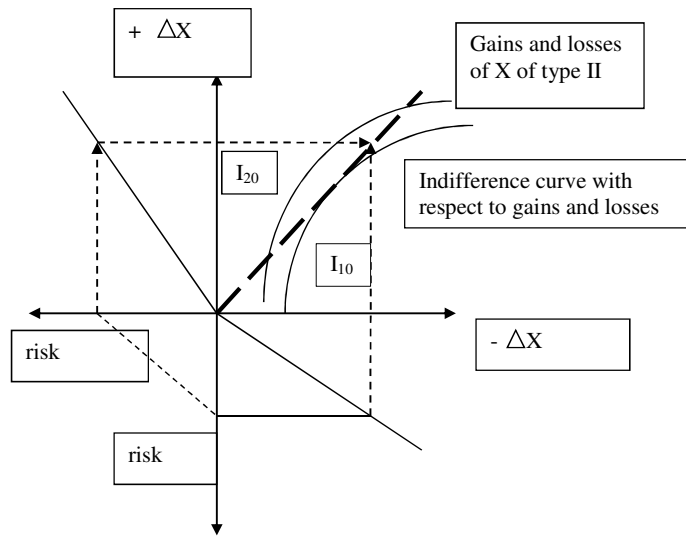
risks turn to risks of planned output. In quango 1 the first three reasons may lead to risk in the shape of the output-labour curve, as shown in Figure 4.



**Figure 4.** Risk situation of a quango 1 (Authors' compilation)

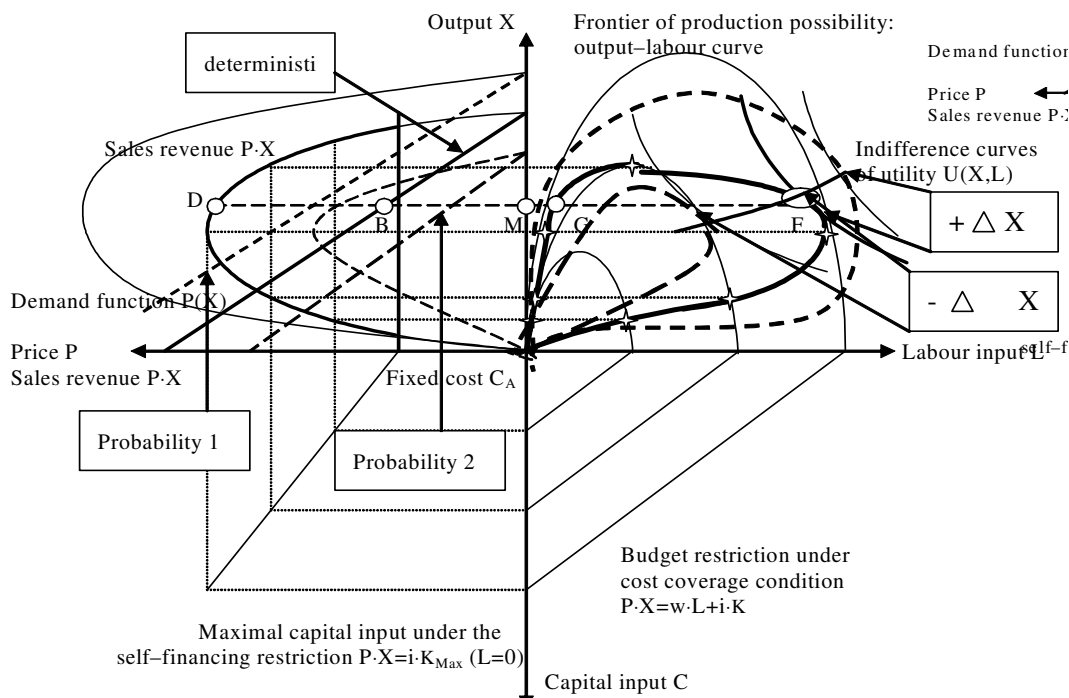
Here a situation is shown where risk on the *budget size* prevails. The thin black line shows the situation when no risk would appear. The dotted line shows the risky budget which might be larger or smaller. The management is of type I and it looks for its optimal position. If a budget becomes fixed it adapts. With the higher budgets there might be output gains – also improvement of public task fulfilment – and with a lower budget the quango faces output losses. In Figure 4 the risk for output gains and losses are depicted. For given gain and loss risks a curve results which shows the combinations of output increases and decreases if the same risk is taken under consideration. The thick dotted line results in Figure 5. In case of no risk the management chooses the optimal point Z in Figure 4, situated on the thin solid line. Now the management might evaluate risks in such a way that they have preferences with respect to output gains and losses. A Morgenstern utility function is mapped through a set of indifference curves, as in Figure 5. The risk to face higher output shrinkages has to be compensated by higher chances of output gains. The indexes of the indifference curves are higher to the left (e.g. from  $I_{10}$  to  $I_{20}$ ). The result shows that the management that is more prepared to take higher risk to realize output gains tries to realize solutions with higher outputs and therefore better achievement of public goals. The anxious management wants to avoid risks and is satisfied with smaller outputs. This solution occurs with type I management.<sup>12</sup> Again, the type I and II management show more entrepreneurship.

<sup>12</sup> The same is true with type I management, where the outputs tend to be higher. With type III there is the X variation which is rather small as it is zero. Type IV also has an output of zero with quango version 1. These



**Figure 5.** Risk solution concerning a risk-related utility function (Authors' compilation)

For quango 2 the same analysis can be repeated (Figure 6). In general, type I and type II will be more entrepreneurial. For type III the output varies minimally as the turnover maximal solution with respect to  $X$  lie very close to each other. Also, type IV moves in direction of a higher  $X$ , but keeps the absolute level of output rather low.



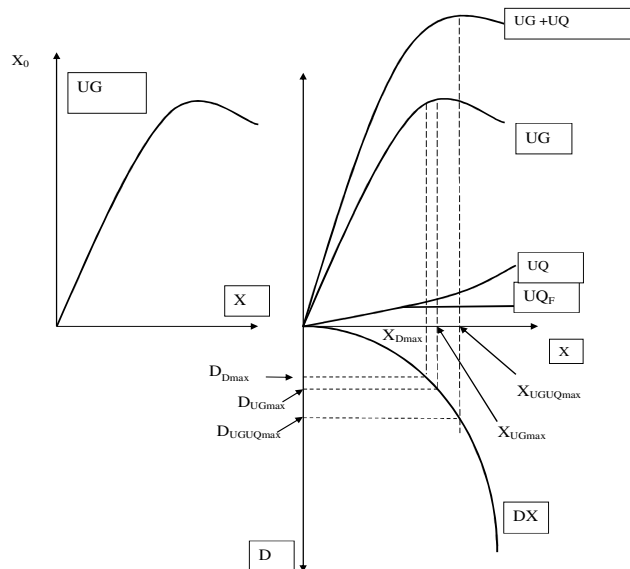
**Figure 6.** Risk situation of a quango 2 (Authors' compilation).

solutions are also obtained when factor prices are uncertain and if the production techniques are uncertain. There, according to the risks, we have different sets of output labour lines as well.

## 4. VERTICAL AND HORIZONTAL COMPETITION OF QUANGOS

Quangos are coordinated in various ways – vertically and horizontally. Vertically they negotiate with higher ranking public economic units for output volumes, staff volumes, budget sizes, competences, etc. Horizontally they are in competition with each other concerning budgets, service volumes, clients, service areas, etc.<sup>13</sup>

According to the types of quangos and the legal or actual ways of influencing the quangos *different vertical competition models* can be applied or developed. The degree of public entrepreneurship of the quango meets the entrepreneurship of the higher ranking public economic unit. Suppose a *quango 1* receives a fixed budget by a government. The utility of quango 1 (UQ) corresponds, according to Figure 7, to the production of the respective amount of  $X_0$ . Here, the budget is given and the entrepreneurial management is of Type I. For alternative budgets, the curve DX in the lower right panel results. The utility of the government (UG) is shown on the left panel, if the entrepreneurial government wants a high output. Both utilities (the government and quango (UQ)) are captured on the right panel (UG + UQ). If the government wants to achieve its *maximal utility*  $X_{UGmax}$  is produced and an appropriate budget ( $D_{UGmax}$ ) has to be allocated. Then the government influences the quango in an entrepreneurial sense. If the entrepreneurial government wants to maximize the *joint utility* with the entrepreneurial quango, it has to provide a higher budget to the quango ( $X_{UGUQmax}$  and  $D_{UGUQmax}$ ).



**Figure 7.** Utility curves of government and quango (Authors' compilation)

<sup>13</sup> There are three kinds of vertical competition relations, where they: (a) are responsible to a government, if they are governmental agencies (mostly quango 1 version); (b) are responsible to a Parliament and checked by monitoring courts, for example a self-administrative body not directly responsible to government (mostly quango 1); (c) show an owner and serving management structure when operating as a public firm of public or private law (mostly quango 2).

If the quango *participates in the utility* of the government, the government has to leave part of its utility of the size of UQ to the quango. To impute its will as much as possible, the government is interested in maximising the difference between the curves UG and UQ. The best solution for the government results in Figure 7, where the marginal utility of the government equals the marginal utility of the quango. The respective budget decreases ( $D_{D_{max}}$ ), but also the respective quantity ( $X_{D_{max}}$ ).<sup>14</sup> If higher output causes the *quango disutilities* because of higher efforts, the UQ curve shows that to keep the utility of the management at the same level, higher budgets become necessary. The UQ curve then expresses a curve of sacrifices of utility of government to keep the quango at a minimum utility level. Considering these sacrifices, a principal-agent solution results where the marginal utility curve of government equals the marginal minimum utility of the quango. This reflects the “*standard*” *solution of principal-agent theory* if no risks exist and if the government is very powerful.<sup>15</sup> The effects of public entrepreneurship depend on both the public economic units and their management types.<sup>16</sup>

The case of a *more powerful quango* in vertical competition is described by Figure 8, depicting the government’s utility (UG) in the upper right quadrant and that of a quango (UQ) in the lower left quadrant. For a budget D a volume X results, that leads to the combination of utilities of government and quango.<sup>17</sup> In the upper left quadrant a point on the thick line corresponds to this utility combination. It shows all possible Pareto optimal solutions that can be attained by the two partners. If minimum utilities are claimed by the partners ( $UG_{min}$  and  $UQ_{min}$ ), the solution space gets reduced to the thick line between points A and B. Applying the Nash solution concept<sup>18</sup> to non-constant sum games leads to a negotiation solution at point E. If management types at both levels coincide with type I and II managers, high volumes X and public entrepreneurial solutions result. If the non-entrepreneurial management type, e.g. type III of IV, dominates the quango, the governmental entrepreneurship is hindered.

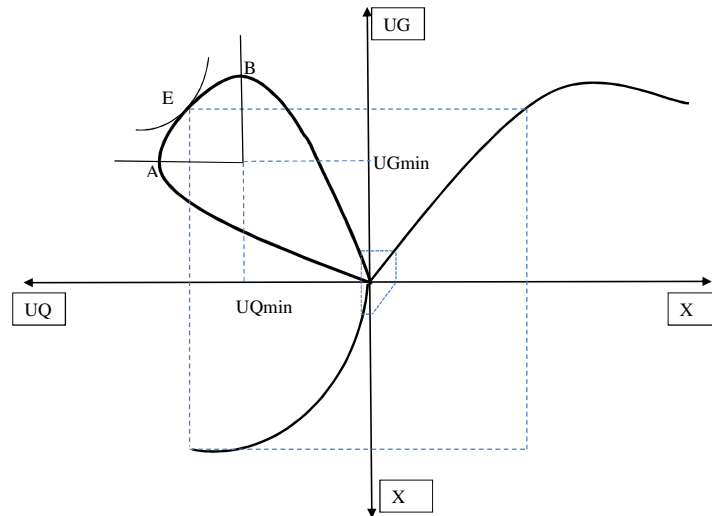
<sup>14</sup> If the government dominates in such a way that the quango should receive a fixed minimum utility, the utility of a quango becomes a parallel line ( $UQ_F$ ). Maximizing the difference between UG and  $UQ_F$  brings the government again to its utility-maximizing budget.

<sup>15</sup> Different probabilities of information about the occurrence of X or the activities of the agent are not considered here.

<sup>16</sup> The type II management in both public units will produce highly entrepreneurial results. If type III prevails in one or both of them, the output tends to zero. This is also true with type IV. An interesting case is that in the course of political entrepreneurship the output is reduced and the governmental economic unit is interested in small outputs only, e.g. the political entrepreneurship is leading by disarmament. Then the government induces a very small X in contrast to the quango, which then leads to solutions with a small X which can be shown by the previously stated model.

<sup>17</sup> If the amount of X in the lower right quadrant is the same as the amount of X on the upper right quadrant, then the corresponding utilities can be found on the axes UQ and UG. A utility combination point on the thick line in the upper left quadrant corresponds, showing all possible Pareto optimal solutions that can be attained by the two partners.

<sup>18</sup> The solution is where the product of the utility  $UG-UG_{min}$  and  $UQ-UQ_{min}$  is maximised [ $(UG-UG_{min})(UQ-UQ_{min}) \rightarrow \max$ ]. The indifference curve in the upper left quadrant shows a constant value of this product. There exists a set of these curves. Point E marks the highest which can be reached.



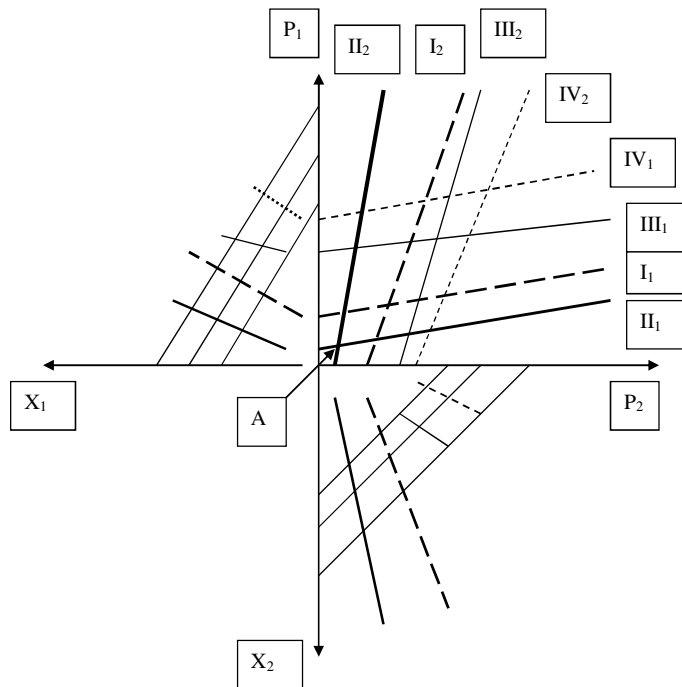
**Figure 7.** Utility curves of a quango and a government in the case of negotiations (Authors' compilation)

Sometimes, the government takes the *role of an owner* in vertical competition. It might ask the quango 2 to achieve profits transferred to the government. In Figure 3, the thick curve on the upper right quadrant contracts and the output of the quango shrinks as its utility, whereas with rising profits the utility of the owning government increases. Possible combinations of utilities between the government and quango result, out of which a negotiation solution is found by applying the Nash solution concept. In this way, the outputs, profits and utilities are formed. Here, the governmental unit will reduce the public entrepreneurial activities of the quango in favour of other activities of other public offices. It might also be just a sign of non-entrepreneurial government activities that are linked to reduction-oriented non-active policies.

For a quango in *horizontal competition* a duopoly reveals some influences of entrepreneurship, the parameter of action is the price and the two quangos, e.g. hospitals are competing for patients. According to the price of the competitor a demand curve exists for a quango. A set of demand curves corresponding to alternative prices of the competitors results. Then for each demand curve a different solution space follows for the quango. For each type of management a sequence of optimal solutions can be obtained (Figure 8). The same circumstances prevail for the competing quango.<sup>19</sup> Two reaction lines of the competitors result (see the solid thick lines in Figure 8). If both competitors behave autonomously a Launhardt-Hotelling quango solution at point A results. Such solutions can be analysed for the four management types by obtaining four reaction lines. We show 16 different solutions according to the management types that prevail in the quangos. The prices turn out to be low for the entrepreneurial quangos (type I and II management). High prices are achieved with competition of non-entrepreneurial quangos with type III or IV management.

<sup>19</sup> The solution prices can be transferred in a diagram, where resulting combinations of prices of the two competitors are shown. Reaction lines of the competitors can be derived, which show the optimal price of one quango with a specified type of management given the price of the competitor, e.g. for type I management. The same can be depicted for the competitor.





**Figure 8.** Duopoly of quangos, Solutions concerning different management types (Authors' compilation)

There remains a wide field of analysis with respect to different oligopolistic behaviours, dynamic analysis, and perspectives of market development. When the quangos behave according to Krelle (1976) there might appear regions of price combinations where both quangos show no interest in changing prices, also if they are of entrepreneurial management types.

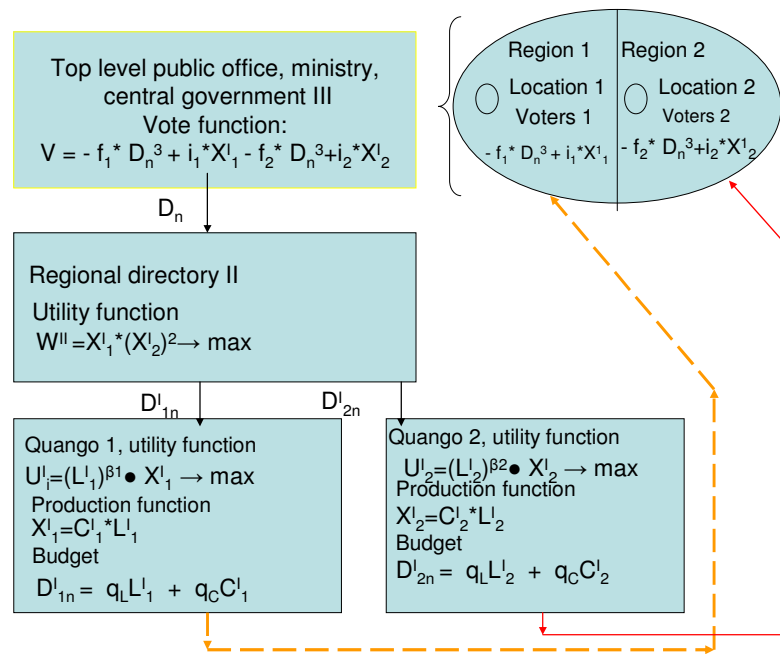
## 5. THE PROBLEM OF MEASURING THE SUCCESS OF POLITICAL ENTREPRENEURSHIP USING A QUANGO

A quango is a means of political entrepreneurship, which is oriented to “value added”. Therefore, a microeconomic indicator of success might be the quango’s output, if the public goal attainment is positively correlated to the output provided. In this aspect we detected managers of type II and I as successful in quango version 1 and 2, as the higher the output achieved, the higher the success. In this situation the evaluation of the management and the idea of output-oriented political success are harmonized at least in type II management. There the political evaluation and the evaluation by the management conform. Difficulties arise if the political evaluation is increasing along with increasing output until an evaluation maximum, and is decreasing with even higher output than after the optimal political volume. The political evaluation and that of management I are in conflict, as the managers of type II tend to produce too much. Then the budget has to be decreased in version 1, or a profit must be demanded in version 2 to reduce the production volume. If possible, there might be a direct order for a production restriction, which leads to a budget rest in version 1, or a profit in version 2. In the case of management type I, more resources are needed to produce the desired output. To produce the politically desired output, a higher budget must be assigned to the 1 and higher fees have to be paid by the receivers of the services. Here the political evaluation of the output is not in total harmony with the output

evaluation by the management; in addition, the management tries to ensure a relatively high output. The situation is much more unfavourable to political success in the case of manager types III and IV, where the management evaluation differs much more from the political. The political evaluation concerning the output can be based on different indicators such as voter reactions, interview results by clients, activity effects, etc.

In the case of a political entrepreneurship result in terms of votes, the effects can be shown within a very simplified administrative system (Batey, Friedrich 2012) with two quangos of version 1 competing for budgets in the two regions named 1 and 2 illustrated in Figure 9. They are producing output  $X$  and show a production function depending on capital  $C$  and Labour. The types of management are expressed by the utility functions of the quango management. The quangos deliver services to inhabitants being voters in region 1 and in region 2. The voters there react positively to the high production of  $X$  but negatively to the budget being financed. There is a government who determines the total budget, which gets distributed by a directory to the quangos. The government maximizes votes from the two regions and the directory shows preferences for the quango work results. The goal attained by political entrepreneurship is to win votes.

This result shows the effects of political entrepreneurship in terms of votes considering the type of quango management adopted by the government. The total and individual budgets depend on voter sensitiveness ( $f_1, f_2$ ) to the production functions, the types of management (see size of  $\beta$ ), the aim of the government to win votes and the preferences of the directory, and factor prices. If a management of type II prevails,  $\beta$  becomes zero. The management wants to maximize  $X$ . The problem is that no integrated economic and political model that has been verified is available. This is also due to approaches to determining the effects by means of CGE (Computable general equilibrium models) as these approaches are weak for modelling the public sector and do not normally include political processes. Furthermore, the quango result is principally difficult to measure in terms of political entrepreneurship if there is vertical bargaining between the government and quangos. The question also exists of whose political entrepreneurship should be achieved that of the government (principal) or that of the quango (agent). If the goals are in conflict, both are not fully successful in terms of their goals. If they come to an agreement, which is known and the  $X$  to be produced are fixed. The realized  $X$  might be compared with the  $X$  the quango achieved. Therefore, the quango result must be measured at the level of the individual quango.



**Figure 9:** Public entrepreneurship using quangos and public offices (similar to Batey and Friedrich, 2012)

Maximizing votes for both regions by differentiation to  $D_n$  yields the optimal budget<sup>20</sup>:

$$D_{n_{optimal}} = (2i_1(1 + \beta_1)/(2 + \beta_1)2 + 8i_2(1 + \beta_2)2) / 27qLqC(f_1 + f_2)$$

At the quango level, social accounting might be used to identify the success of political entrepreneurship. There are several approaches (Eerma, Friedrich 2012), which all show different bases for evaluation. Some use indicator analysis as a special form of utility analysis. There should also be indicators for the social success of the quango. But then the simple quango theory provided within this paper is not sufficient. The social indicators for political entrepreneurship success might refer to many features of the quango concerning the procurement, production, delivery and finance sphere of the quango. Then a much more sophisticated management model is needed, which comprises the fixing of the relevant parameters of action, and results which refer to the indicators. If the indicators refer to results attained using other economic units outside the quango (e.g. clients, public offices, firms, voters, etc.), we again need a model of the effects of

<sup>20</sup> Maximizing utility of quango 1, and rearranging the terms yields:

$$X_{11} = (1 + \beta_1) * (D_{11n})^2 / ((2 + \beta_1)2 * qL * qC)$$

Such a relation is also found for quango 2

Managers of public office II maximize utility under the restriction:

$$D_n = D_{11n} + D_{12n}$$

The relation  $2 * D_{11n} = D_{12n}$  is evoked and the relation  $D_{11n} = D_n/3$  is found. Similarly, one finds relation  $D_{12n} = D_n * 2/3$  by substituting  $X_{11}$  and  $X_{12}$  in the vote function and substituting  $D_{11n}$  and  $D_{12n}$ , and according to the budget relation the vote function depends solely on  $D_n$ . Inserted into the Vote functions and maximizing votes leads to the result mentioned above.

quango operations. There might be a solution if there is a fixed relationship between the quango output and the indicators and if the social weight system between the indicators is fixed and does not vary with the output, or the changes of social weights follow regularities when the output of the quango changes. But the necessary information about social weights and indicator developments are normally not available. If the indicators concerning third parties play a role then it becomes difficult to identify the contribution of the quango if several economic units together have caused the success in terms of the indicator value. Deferrals of the contribution of others become necessary. Another difficulty consists in the social success of different quangos because to enable comparisons in terms of social success they should all use the same indicators and must apply the same social weight system. In other words, there should be a quango related welfare function, which is the same for all quangos, when their social success should be compared. The other criteria for measuring social success would be to use the willingness to pay approach developed in welfare theory for benefit cost analysis and usable for social success accounting. Then the willingness to pay for quango services and operations has to be identified. There are also difficulties in identifying the effects for determining social success as well as joint operation problems and data problems. When the willingness to pay is fixed by comparable verification methods there are more chances to compare the social success of political entrepreneurship. A social bookkeeping system for verifying annual social success in quangos is also being developed (Erma, Friedrich 2012). However, without more sophisticated methods the only practical way is to turn to quango output.

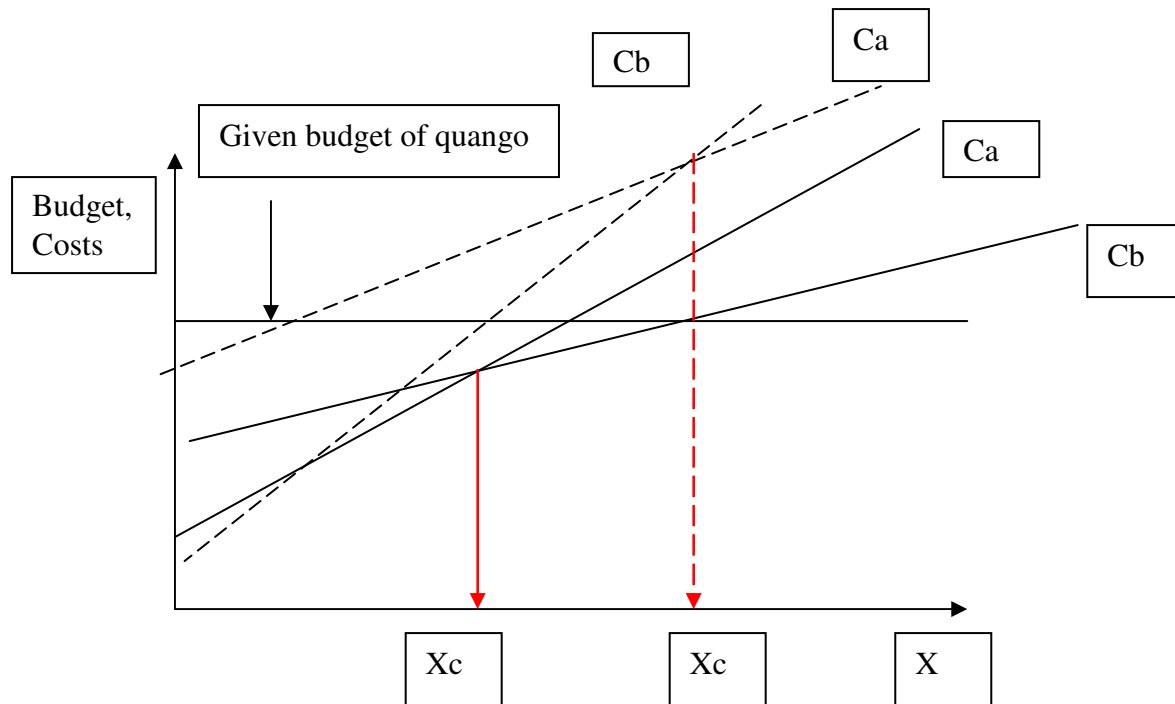
There have been three approaches developed (Friedrich 1969) concerning decisions for identifying decision alternatives favourable in the sense of achieving a high output:

- a graphical and production process oriented set of rules;
- a machine and equipment oriented approach;
- and, a capital stock growth model to maximise output.

Here we deal with the first alternative with respect to the two versions of quangos. If there is a quango 1, which can choose between two different production techniques, (a) and (b), and if the budget is fixed and the factor prices are given and the management type is given, two different cost functions result (see Figure 10)<sup>21</sup>.

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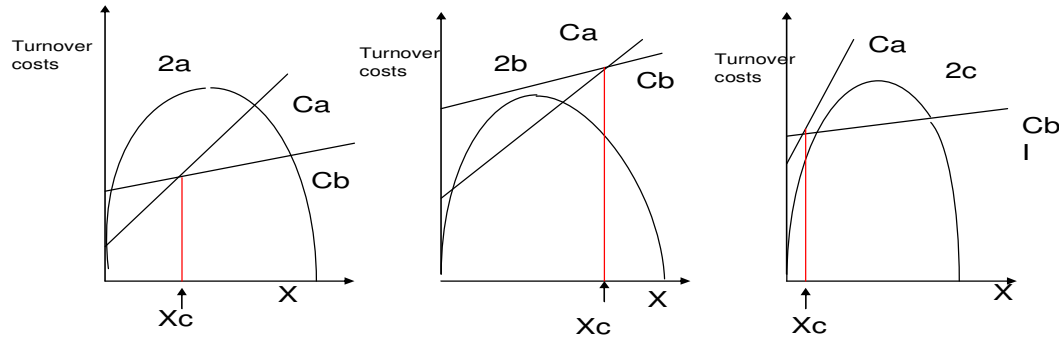
<sup>21</sup> The cost functions  $C_a$  or  $C_b$  must not be linear. That depends on the properties of the production functions and the utility functions of the management (type of management). If there are several points of intersection for the cost curves, the developed criteria applies to the point of the cost curve intersection which is furthest to the right and where the cost can be covered.



**Figure 10.** Criteria for political entrepreneurship success in terms of high volume for quango version 1 (Author's compilation based on Friedrich 1969)

A simple criterion results. The production process (techniques) is the better one which shows at the so-called critical volume — the lower variable cost per volume. The critical value is shown where the costs of Ca and Cb expressed by thick lines are the same. This this criterion is valid when the budget size allows to cover the costs of the critical volume. If the costs of the critical volume cannot be covered by the budget of the quango, the better production process (technique) is the one that shows the higher variable costs per output volume. This case is illustrated by the dotted lines.

Such criteria can also be provided for quango 2. Figure 11 also shows two cost curves for two different production techniques – Ca and Cb. The budget available for quango 2 coincides with the turnover curve of the quango. We detect similar criteria as for quango 1. If a critical volume can be sold at a profit, the technique makes higher output possible and lower variable costs per output. If the critical volume is larger than that of the maximal turnover, which means the quango is loss making there, the technique with the higher variable costs per output is the better option. If a loss making critical value is left out of the maximum turnover, the technique leading to lower variable cost per output is the one allowing higher output.



**Figure 11.** Criteria for political entrepreneurship success in terms of high volume for quango version 1 (compiled by the author and (Friedrich, 1969))

Therefore, if the success of political leadership is measured in terms of output we can develop management tools to evaluate and decide on social successful outputs. If a social success as discussed above should be measured, and especially if it should be measured according to several indicators, one runs into severe difficulties in evaluating and measurement. One way to stress the success of a quango is to show how it develops in the course of time, pointing to some favourable and less favourable aspects of its development.

## 6. PUBLIC AGENCY OF REAL ESTATE MANAGEMENT AS QUANGOS

In Germany real estate agencies exist at the Federal level, at the state level and at the municipal level (70% of all municipalities). In addition, there are special construction offices.<sup>22</sup> The varieties of agency tasks are shown in Table 2<sup>23</sup>. Agencies have a large scope of decision making and where founded to sell real estate more easily, to reduce the use of real estate by the public economic units of the jurisdictions, to establish internal real estate markets of a jurisdiction and to finance themselves partly from their sales. Normally a monopoly agency for real estate is created, which possesses considerable power over the real estate users of the jurisdiction. Legally they are

<sup>22</sup> At the federal level there is a construction planning administration and a special company to construct federal government buildings in Berlin. The state construction offices act as agents for the federation. The states have special construction offices and the municipalities have construction departments.

<sup>23</sup> In Table 2 the abbreviations of the states are as following: Baden-Württemberg (BW), Bayern (BA), Berlin (B), Brandenburg (BRA), Bremen (BR), Hamburg (HA), Mecklenburg-Vorpommern (MV), Niedersachsen (NI), Nordrhein-Westfalen (NRW), Rheinland-Pfalz (RP), Sachsen (S), Sachsen-Anhalt (SA), Saarland (SAA), Schleswig-Holstein (SH), Thüringen (TH).

public institutions of public law or public enterprises of public and private law also according to their main tasks. As an example, we refer to the *Federal Agency for Public Property* in Germany. It is a legal person of public law, owning most of the real estate of the Federation and employing around 6500 employees. The board of directors manages the Agency in its own responsibility. Some businesses need the approval of the Federal Ministry of Finance, such as taking over new tasks and contracts of a substantial financial volume. Factually, the agency is involved in all matters concerning real estate, including the internal rent market. It depends partly on the Federal Ministry of Finance, but all real estate using ministries and public offices also depend on the agency. According to our criteria it can be defined as a quango. Due to its many tasks it has a rather complicated goal structure.

It is an organisational measure of *public political entrepreneurship* to realize new public management as it was established through the decisions of the Federal Parliament. A piece of *technical public entrepreneurship* was introduced. The commercial bookkeeping system and sophisticated cost accounting, information systems, and real estate market research, conversion techniques, etc. have to be applied on a large scale. Public sector entrepreneurship refers to the radical real estate centralization policy involved. The ongoing establishment of the Agency, the improvement of its IT systems and the transfers of real estate ownership to the agency until 2012 does not allow to detect whether the management types are entrepreneurial, e.g. of type I and II, or whether the management is solely cautious not to make too many mistakes.

The innovative entrepreneurship is supported by the fact that the Agency partly finances its activities through property sales and financially successful conversions. It cannot be easily detected whether the managers follow policies with respect to their tasks differently from those of the pre-owners.

Whether this type of entrepreneurial real estate management is *successful* depends mainly on the fact whether cost saving synergy effects of centralization crowd out the additional transaction costs of bureaucracy and cost of additional negotiations with users, construction offices, or of double administration in the Federal Ministry of Finance, other ministries and the Agency. To determine the social success an appropriate social accounting and bookkeeping system for real estate management has to be developed.

**Table 2.** Tasks of public real estate agencies of the federation F, the city of Munich CM and the 16 states

Tasks	F	C M	BW	BA	B	BRA	BR	HA	HE	M V	NI	NR W	R P	S	SA	SAA	S H	TH
<b>(I) Real estate management</b>																		
(1) Information management concerning real estate data, stocks and usage, information provision	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(2) Provision of real estates to public user	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(3) Management of real estates not in public use	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
(4) Management of real estates for other domestic jurisdictions, public bodies and public firms and those from abroad	X	X	X	X			x	X			X	X	X	X	X		X	X
<b>(II) Real estate and plots management</b>																		
(1) Procurement of real estates	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(2) Sales of real estates, leasing, fixing of rents	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(3) Administration of rights of third parties concerning public real estates	X		X	X	X	X	X	X		X	X	X	X	X	X	X		X
(4) Evaluation of rents and property values		X								X	X	X						
(5) Contract management	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>(III) Construction tasks</b>																		
(1) Key- account management	X		X	X	X	X	X	X	X	X	X	X	X	X	X			X
(2) Planning and real estate development	X		X		X	X	X	X	X	X	X	X	X	X	X			X
(3) Procurement of services	X		X	X	X	X	X	X	X	X	X	X	X	X	X			X
(4) Project finance		X	X		X	X		X						X				
<b>(IV) Facility management</b>																		
(1) Technical and infrastructure services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(2) Maintenance of real estates	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(3) Organization of other services: e.g. transportation, moves					X	X						X						X
<b>(V) Ownership functions</b>																		
(1) Allocation of ownership	X					X		X		X	X	X	X	X	X	X		X
(2) Nationalizing and municipalizing	X		X					X		X	X							
(3) Redemption of real estates			X					X		X	X					X		
(4) Fiscal heritage			X					X		X	X					X		X
(5) Public Private Partnerships	X	X	X		X	X	X		X			X	X	X	X			
<b>(VI) Military tasks</b>																		
(1) Conversion of military real estates	X						X						X	X	X			
(2) Support giving up real estates by NATO	X						X				X		X					
(3) Regulation of maneuvers damages	X																	
<b>(VII) Environmental tasks</b>																		
(1) Reclamation of real estates	X		X												X			
(2) Administration of forests and agricultural property	X	X	X															
(3) Management of hunting districts	X																	
(4) Protection of animals and preservation of species	X																	
(5) Energy saving					X	X	X				X	X	X	X	X		X	X
<b>(VIII) Support of public projects</b>																		
(1) Support of regional plans and zoning	X	X			X	X	X	X				X	X	X	X	X	X	X
(2) Coordination with other jurisdictions or public offices	X	X		X	X	X	X	X				X	X	X	X			
(3) Mobilization of real estate market	X						X	X					X		X			
(4) Land compensations		X					X	X				X	X		X			
(5) Support of business promotion, public housing etc.	X	X		X	X		X	X	X			X	X		X			
<b>(IX) Infrastructural tasks</b>																		
(1) Engagement in coastal protection						X					X							
(2) Engagement in pipe line construction													X					
(3) Activities related to transportation ways																		
<b>(IX) Other tasks</b>																		
(1) National monument preservation and protection related to real estates					X		X		X		X		X	X	X		X	
(2) Organization of exhibitions	X		X												X			
(3) Measures concerning work safety in buildings								X							X			

Source: Friedrich, Reiljan 2013



## 7. ESTONIAN GENOME CENTER AS A QUANGO

The *Estonian Genome Center* is currently a research venture of the University of Tartu (Hereinafter EGCUT). The aim of the EGCUT is to create a database of health, genealogical and genome data representing 5% of Estonia's population. Although the organisational form of EGCUT has varied substantially over time, the basic aim has been kept (Kattel, Suurna, 2008).

EGCUT was founded by the Government of the Republic of Estonia in 2001 in the form of a public-private partnership (PPP) and was subsequently reorganized as a research institution affiliated with the University of Tartu in 2007. The centre was initially called the Estonian Genome Project Foundation, founded under the supervision of the Ministry of Social Affairs to govern the organisation. Soon after the creation, a *private firm* called EGeen Ltd (a joint venture between the Estonian Government (2.5%) and EGeen International Inc (97.5%)) was incorporated to finance and commercialise the results of the foundation (Kattel, Anton, 2004). As EGeen retained the right to commercialise the research results for 25 years, it was obligated to make fixed annual payment and additional fees depending on its financial success for its right to commercialise the data. The Ministry of Social Affairs being responsible for the EGCUT did not have any competence for handling risky economic projects (Kattel, Suurna, 2008), but also the *conflict of interest* between public goals set and profit motives of EGeen (Menrad et al., 2002) hindered the development of entrepreneurship.<sup>24</sup> However, in 2010–2011 the EGCUT budget was composed of government funding (30%) and research project funding (70%) and the role of the centre has changed respectively, incorporating more research-oriented activities (Estonian Genome Center, 2001-2011).

The establishment of the quango was an act of political entrepreneurial management. However, it could not develop entrepreneurial innovation activities on a large scale, due to a lack of financial resources, the influence of private partners and the lagging competence for handling risky projects. On the contrary, its monopoly power and non-entrepreneurial behaviour hindered the biotechnology development. The political entrepreneurship did not result in successful technological and sector-oriented entrepreneurship. It shows that the public and private entrepreneurs do not necessarily match. The quango has changed from being a quango 1 (under the Ministry of Social Affairs), to a quango 2 solely of the University of Tartu, to which new tasks were consequently allocated.

## 8. CONCLUDING REMARKS

(1) Public entrepreneurship refers to a public actor who is innovative, who recognizes value chances and is going to invest and take risks. The actor can be public offices, public firms or managers in those public economic units. According to the field of public entrepreneurial activities political, social, knowledge, technological and sector oriented management may be distinguished. These *public entrepreneurships* are many times interconnected.

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<sup>24</sup> The private funding streams were almost cancelled in 2005 and the subsequent funding on behalf of the public sector (in the form of subsidy and credit) was sustained only for two years (2007-2008) in the amount comparable to previous private funding. Therefore the centre's activities were rather limited at the time (Kattel, Suurna, 2008).

(2) The economic definition of a quango is very close to that of a *public enterprise*. One can apply the economic theory developed for public enterprises and for public offices. A quango 1 theory is developed if the quango is more of a public office type. The public enterprise theory is applied to model a quango 2. Public entrepreneurship can be related to both economic units as actors and to the managers of these economic subjects. Quango public entrepreneurship occurs if a new type of organisation is introduced or new tasks get allocated. The development of an existing quango depends on the type of its management and on the influences that stem from horizontal and vertical competition. Type I and II managers might propel the development of the quango. The quango seems suitable to attract managers who like to achieve social values and public goals using the broader scope of decision making. Also, when risk taking is considered, type I and II managers seem more entrepreneurial.

(3) In vertical competition the influence of a higher rank administration determines the degree of public entrepreneurship. With a powerful higher rank administration we find traditional principal-agent solutions where the will of the higher ranking public unit dominates. If this will is entrepreneurial the quango can be too. If both have much negotiation power, a Nash solution is determined by both partners. The duopoly model presented that the degree of public entrepreneurship is also influenced by public or private competitors depending on the management types and goals pursued.

(4) The German Federal Agency for Public Property was identified as a quango. It combines and centralizes many tasks related to real estate management. It receives ownership of most federal real estate and has to manage them, including sales and procurement, partly to finance itself from sales and to establish an internal real estate rent market. The power of the quango stems from the law, the agreements with the ministries, the many tasks and its information and knowledge on real estate matters. The quango is able to attract entrepreneurial managers as it has so many tasks, big size and influence. It deals with public entrepreneurship as many tasks require innovative decisions and a value increasing use of real estates. Many risky investments have to be made. The experiences concerning its management results need to be identified by a social accounting bookkeeping not available yet.

(5) In Estonia, a quango 1 for genome research was established by the government. This was a measure of political entrepreneurship thus combining public and private entrepreneurships. Conflicts between the two partners resulted and hindered a successful technological and sector entrepreneurship. Meanwhile the quango 1 was changed to a quango 2 owned by the University of Tartu and financed through public research funding and contributions of the central government. Its task structure has changed as well.

## REFERENCES:

- Bach, Tobias; Hustedt, Thuid, (2008), 'It's T to Reform EU Agencies', Available <http://www.guardian.co.uk/public/features/story/0,,2295361,00.html> (19.06.2012)
- Bailetti, Toni (2012), 'Technology Entrepreneurship: Overview, Definition, and Distinctive Aspects', *Technology Innovation Management Review*, February, pp.5–12.
- Batey, Peter; Friedrich, Peter (2000) 'Aspects of Regional Competition', pp.- 3-33 in: Peter Batey, Peter Friedrich (Eds.), *Regional Competition*, Heidelberg, Springer.
- Bogumil, Jörg (2007), 'Regierung und Verwaltung'. *Politische Bildung*, 4.
- Cabinet Office, Office of Public Service (1997), 'Public Bodies, The Stationery Office, Norwich. Introduction. Current Issues', *Public Organization Review*, vol. 3, no. 3, pp. 219-245.
- Dehne, Anita, Peter Friedrich and Chang W. Nam (2009), 'Determination of Fees for Local Services under the Consideration of Public and Management Objectives', *Zeitschrift für öffentliche und gemeinnützige Unternehmen*, No. 32, pp. 1-18.
- Eerma, Diana; Friedrich Peter (2012), 'Ein Kontenrahmen für eine „gesellschaftsbezogene Rechnungslegung“ der Fakultät für Volks- und Betriebswirtschaftslehre der Universität Tartu in Estland', *Zeitschrift für öffentliche und gemeinnützige Unternehmen*, Vol. 35, pp. 3-27.
- Eichhorn, Peter and Peter Friedrich (1976), 'Verwaltungsökonomie', Baden-Baden: Nomos.
- Eichhorn, Peter et al. (2002), 'Verwaltungslexikon', 3rd edition, Baden-Baden: Nomos.
- Estonian Genome Center 2001-2011, <http://www.geenivaramu.ee/documents/estoniangenomecenter.pdf>, 05.06.2012.
- European Regulation (2005), Interinstitutional agreement on the operating framework for the European regulatory agencies. COM, 59.
- Feng, Xiao; Friedrich, Peter (2000), 'The Role of Public Enterprises in Regional Competition', In: *Regional Competition*, Batey, Peter; Friedrich, Peter (Eds.), pp. 186–202, Heidelberg: Springer.
- Filion, Louis, J. (2011), 'Defining the entrepreneur', in *World Encyclopedia of Entrepreneurship*, ed. By Léo-Paul Dana, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 41-52.
- Focus: What's wrong with quangos? *The Sunday Times*, 2006, October 29, p.1.
- Friedrich, Peter (1969), 'Volkswirtschaftliche Investitionskriterien für Gemeindeunternehmen', Walther G. Hoffmann (Ed), *Schriften zur angewandten Wirtschaftsforschung*, Bd. 22, Tübingen (Mohr).
- Friedrich, Peter and Janno Reiljan (2013), 'Central Government Public Real Estate Policy', Berlin (forthcoming).
- Friedrich, Peter, J. and Kadri Ukrainski (2011a), 'An Approach to Economic Quango Theory', *International Business: Innovations, Psychology, Economics*, Vol. 2, pp. 7-27.
- Friedrich, Peter, J. and Kadri Ukrainski (2011b) 'Is "Quango" a useful concept in public economics?', in *The 5th International Scientific Conference Entrepreneurship and Macroeconomic Management: Reflections on the World in Turmoil*, ed. by Afrić, K. Rakitovac, Violeta Šugar and Vanja Bevanda; Pula: Juraj Dobrila University of Pula, pp. 1069-1125.
- Kattel, Rainer and Riivo Anton (2004), 'The Estonian Genome Project and Economic Development', *TRAMES*, Vol. 8 (58/53), No. 1/2, pp. 106–128.
- Kattel, Rainer; Suurna, Margit (2008), 'The rise and fall of the Estonian genome project', *Studies in Ethics, Law, and Technology*, Vol. 2, No. 2, pp. 1–22.

- Klein, Peter, G., Joseph, T. Mahoney; Anita, M. McGahan and Christos, N. Pitelis (2010), 'Toward a theory of public entrepreneurship', *European Management Review*, No. 7, pp.1–15.
- Knight, Frank, H. (1921), 'Risk, uncertainty and Profit', Boston, Houghton Mifflin.
- Kuhlmann, Stephan (2006), 'Local authorities between the state and the market: An international comparison of local government systems and reforms', *German Journal of Urban Studies*, Vol. 45, No. 2, pp. 5–46.
- Menrad, Klaus et al. (2002), Research on the Estonian Biotechnology Sector Innovation System, final report submitted to Enterprise Estonia, Tallinn, Fraunhofer ISI, February 2002.
- Roberts, Nancy, C.; King, Paula (1989), 'Public Entrepreneurship: A Typology', Naval Postgraduate School Report, no. AD-A215 634.
- Schnellenbach, Jan (2007), Public entrepreneurship and the economics of reform, in *Journal of Institutional Economics*, no. 3: 183–202.
- Schubert, Klaus and Martina Klein (2006), 'Das Politiklexikon', 4., aktuelle Aufl., Bonn.
- Schumpeter, Joseph (1934) 'The Theory of Economic Development', Cambridge, Mass: Harvard University Press
- Tax payers alliance (2007) Structure of Government No.1, The Unseen Government of the UK, London, pp.1-4, [http://www.archive.official\\_documents.co.uk./document/caboff/bodies\\_97/intro-1.htm](http://www.archive.official_documents.co.uk./document/caboff/bodies_97/intro-1.htm). (19.06.2012)
- Verschuere, Bram (2006), 'Autonomy & Control in Arm's Length Public Agencies: Exploring the Determinants of Policy Autonomy'. Doctoraatsthesis, Instituut voor de Overheid, K.U. Leuven.

## KOKKUVÕTE

### Quangode ettevõtl(ikk)use hindamine

Artikkel käsitleb quangosid (*quasi-autonomous non-governmental institutions*) kui ühte võimalust toetada ettevõtlust (laiemas mõttes ka ettevõtlikku käitumist) avalikus sektoris. Ettevõtlust avalikus sektoris mõistetakse käesolevas artiklis avaliku sektori subjekti poolse innovaatilise käitumisena, mis on suunatud lisandväärtuse loomisele avalike eesmärkide saavutamiseks, seejuures sarnaselt erasektoriga iseloomustab ettevõtlikkust see, millise riski määraga subjekt teeb investeringu otsuseid. Tulenevalt valdkonnaspetsiifikast, käsitletakse poliitilist, sotsiaalset, teadmiseiga seotud, tehnoloogilist ja sektorispetsiifilist ettevõtlikkust.

Quangod on organisatsioonid, mis on loodud erinevate valitsustasandite (Euroopa Liit, keskvalitsus (föderatsioon või unitaarriik), regionaalne ja kohalik tasand) ülesannete täitmiseks. Quangode funktsioonid ja uue avaliku halduse vormide rakendamispärad on riigiti väga erinevad tulenevalt Euroopa Liidus eksisteerivate koostöövormide, era- ja avalike õigusruumide, detsentraliseerimise poliitikate jmt paljususest. Seetõttu võivad quangod olla väga erineva institutsionaalse ülesehitusega - näiteks tavapärase avaliku sektori ettevõtte, büroo, segaetevõtte või ka avaliku ja erasektori partnerluslepe (PPP) vormis loodud.

Artiklis kirjeldavad autorid mitmeid quangode definitsioone, mis majandusliku analüüsi poolt vaadatuna ei tundu paslikud. Seepärast pakutakse artiklis omapoolne definitsioon ning arutletakse, missugused quangod eksisteerivad erinevates Euroopa Liidu riikides ja mil määral nad erinevad või sarnanevad teiste eksisteerivate organisatsioonidega. Analüüsi tulemus viib autorid järeldusele, et avaliku sektori majandusüksuse (*public economic unit*) olemasolevat definitsiooni saab kasutada ka quangode määramisel. Põhjuseks on asjaolu, et quangod on üksused, mis tegelevad teenuste ja kaupade tootmisega avalikel eesmärkidel ja nad on suuremal või väiksemal määral avaliku sektori alluvuses ja/või omandis. Quangod on tavaliselt sõltumata neile kohalduvast avaliku või eraõiguse raamistikust omaette juriidilised isikud. Teisalt võivad nad olla ka administratsiooni osad, kuid erinevalt teistest allüksustest on neil oma organisatsioon koos eelarve jt. ressursidega ning juhtkonnal õigus vastu võtta otsuseid vähemalt tootmise ja müügi valdkonnas.

Selleks, et eristada quangosid teistest organisatsioonidest, on võimalik rakendada erinevaid majanduslikke ja õiguslikke kriteeriume, mis väljendavad nii sõltuvuse viisi valitsevast üksusest kui ka autonoomia ulatust. Quangosid endid võib pidada ettevõtluse väljenduseks avalikus sektoris juhul, kui need on värskest loodud muutmaks traditsioonilist avaliku sektori juhtimiskontseptsiooni. Teisalt võib poliitilise, sotsiaalse jm valdkonna ettevõtl(ikk)usega olla tegemist siis, kui quangod täidavad täiesti uusi ülesandeid vastavates valdkondades. Ettevõtl(ikk)use määra olemasolevates quangodes peegeldab ka nende juhtkonna käitumine. Juhul, kui tegemist on mitme quangoga ja erineva tasandi juhtkondade suhtega, võib käivituda protsess, mis viib mitmete innovatsioonideni avalikus sektoris. Selleks, et näidata, kui ettevõtliku quangoga on tegemist, pakuvad autorid välja traditsioonilise avaliku büroo mudeli. Seda büroo tüüpi quangot nimetatakse artiklis esimest tüüpi quangoks. Lisaks eeltoodule rakendavad autorid avaliku sektori ettevõtte definitsiooni ning valitsemise mudeleid, sh omaniku ja juhtkonna vahelisi suhteid ja vastastikust sõltuvust. Ettevõtte tüüpi quangot nimetatakse artiklis teist tüüpi quangoks.

Selleks, et selgitada, kui mõjukas on quango juhtkond ettevõtliku suhtumise kujundamisel, kasutavad autorid esimest tüüpi quango mudeli analüüsis erinevaid juhtkonna tüüpe. Innovatiivne ja avaliku sektori mõttes ettevõtlik on selline juhtkond, kes maksimeerib tootmismahu või on orienteeritud kõrgele tootmistasemele seejuures hoides ka töötajate heaolu kõrgele. Selline juhtkond saavutab avalikud eesmärgid juhul kui need on positiivselt seotud tootmismahuga. Samadele tulemustele jõutakse teist tüüpi quangosid kirjeldavas mudelis (tulemused ei muutu ka juhul kui riskid suurenevad tootmismahu kasvades, samuti kui mudelisse kaasatakse riskitundlikkuse funktsioon). Siinkohal on sobiv märkida, et ettevõtlik(ikk)ust hinnatakse mudelites kolme iseloomuliku kriteeriumi (innovaatilisus, lisandväärtus ning investeerimisotsus ja sellega seotud risk) alusel.

Printsipaali-agendi suhteid analüüsitakse vertikaalse konkurentsi raamistikus mõlemat tüüpi quangode puhul selleks, et mõista, kuidas mõjutavad valitseva üksuse ja quango juhtkonna omavahelised seosed ettevõtlik(ikk)ust. Horisontaalse konkurentsi analüüsiks kasutatakse teist tüüpi quango näitel duopoli mudelit, et näidata, kuidas quangod vastastikku võivad üksteise ettevõtlik(ikk)ust mõjutada.

Artiklis käsitletakse, kuidas quangode edukust võiks mõõta, kuna sobivad mehhanismid kirjanduses puuduvad. Kui edukus on positiivselt seotud tootmismahuga, siis jällegi mahtusid maksimeeriv juhtkonnatüüp annab kõrgema edukuse, teiste puhul on edukus madalam. Kui seda tavapäraselt mudelit laiendada hääletajate reaktsioone arvestavaks, siis on võimalik mõõta nii tootmismahu, ettevõtlik(ikk)ust kui ka sellest saadavat eelarvetulu. Laiemas mõttes sotsiaalse edu mõõtmine on siinkohal raske, kuna puudub sotsiaalne heolufunktsioon, samuti ei ole rakendatav maksevalmiduse alusel läbiviidav tavapärane kasu-kulu analüüs. Autorid pakuvad välja, et tulemiga (toodanguga) seotud kriteeriumid võiksidki olla mõlemat tüüpi quangide edu hindamise aluseks.

Artikli lõpus on toodud kaks näidet – üks Saksamaalt ja teine Eestist. Saksamaa avaliku sektori kinnisvara haldav agentuur (*German Federal Agency for Public Property*) on üks näide väga suurest quangost, mis on iseenesest innovatsioon traditsioonilises saksa avaliku halduse kontseptsioonis ja kujutab endast radikaalset kinnisvaraga seotud ülesannete kontsentreerimist ühe üksuse kätte, mille eesmärk oli luua ühtne turg saksa föderaalsete kinnisvarakontorite alusel. Selle reformi edu on raske hinnata, kuna koondatud ülesannete ja nende saavutatuse hinnangute hulk on väga suur. Eesti Geenivaramu projekt on quango, mis on samuti uus organisatsioon ülesandega geeniandmete panga loomiseks, mis esindaks 5% Eesti elanikkonnast. Esialgu loodi see avaliku ja erasektori ühisettevõttena, kuid selline vorm ei osutunud edukaks erasektori partneri finantsilise passiivsuse tõttu. Väljundi (tootmismahu) alusel hinnatuna ei ole see quango seni edukas olnud.