9 Public Good Markets: The Possible Role of Hybrid Governance Structures in Institutions for Sustainability

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Abstract. Based on a review of the concept of markets, a more comprehensive definition of markets is developed. Within this concept it is argued that hybrid governance structures, which are defined as structures in which actors with autonomous property rights transfer part of these rights to a transaction partner without losing all property rights, play an important role. Based on the theory of hybrid governance structures for private goods, the concept of hybrid organisations in public good markets is conceptualised. We are convinced this may contribute to the further elaboration of the "institutions of sustainability" concept developed by Konrad Hagedorn.

Keywords: Action arena, Hybrid governance, Institutions, Public good markets, Transaction costs

9.1 Introduction

In a major part of his work, Konrad Hagedorn focuses on institutions of sustainability (see among others Hagedorn, Arzt, & Peters, 2002; Hagedorn, 2003, 2005). A basic hypothesis in his line of thinking is that there is a need of finding rules and regulations that integrate all dimensions of sustainability. Public good market creation is conceived as one of the possible ways to arrive at more sustainability in agriculture and natural resource management. Examples here include water markets in irrigation schemes or agri-environmental payment schemes in the field of agri-environmental management. Market instruments are also being used in resource management. An example are, tradable permits or quotas markets, not only used for issues like CO_2 emission rights (see Swallow and Meinzen-Dick this volume), but also in fish resource management (tradable fish quota) or in manure policies (tradable manure production rights). Without exception, these examples

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are concerned with issues of contemporary debate that figure high on global, European, national and regional political agendas.

In this contribution, we build further on the ideas already put forward in Van Huylenbroeck (2003), where we argued that hybrid governance structures, defined as cooperative arrangements between different actors (private as well as public stakeholders), may facilitate the functioning not only of private but also of public good markets. Our hypothesis is, therefore, that hybrid governance structures should receive more attention when creating sustainable institutions for public goods. Our contribution is organised as follows: first we revisit briefly the market concept from a neo-institutional point of view and propose an extended market concept, integrating the action arena theory as set forth by Ostrom (1998) with the four layers theory of Williamson (2000). Next, we focus on the importance of institutional arrangements in the functioning of markets and on the role hybrid governance structures may play in this respect, drawing heavily on the work of Menard (1995, 2004, 2007) on hybrid governance structures in private markets. Following that, we extend the theory of hybrid governance to public markets, concluding that an extension of the hybrid governance concept to public markets deserves more attention in future research and can indeed contribute to the further development of Hagedorn's "institutions of sustainability" concept.

9.2 The Market Concept Revisited

Despite the fact that "markets are at the centre of economic activity, and many of the most interesting questions and issues in economics concern how markets work" (Pindyck & Rubinfeld, 1998), attempts to grasp what exactly a market is are surprisingly rare and rather recent in economic thought. Moreover, understanding of the functioning of the market hinges on one's conceptualisation of the market and the attributes of the society in which it operates. In economic literature, the issue of defining the market is rarely explicitly addressed, as Nobel prize winner George Stigler makes clear: "Economic theory is concerned with markets much more than with factories or kitchens. It is, therefore, a source of embarrassment that so little attention has been paid to the theory of markets" (1967: 291).

Menard (1995) suggests that variations in conceptualising the market are in general not formal but rather a reflection of diverging analyses. For example, a market can be understood as a public place where goods are being offered for sale, or as a public gathering held for buying and selling of goods (as in Arndt, 1979; Barnhill & Lawson 1980; Callon, 1998), or as a group or organisation of buyers interested in buying goods, or a sub-division of the population considered as prospective buyers, that is, a group of people sharing similar needs and wants, who are willing and able to engage in the exchange of goods or services that can satisfy them (as in Kotler, 1997). Lindblom (2001) defines the market as the "interaction between suppliers and demanders, where the interaction is voluntary and where

access to the market is open to everyone". Conversely, some economists conceptualise markets as specific organisational forms (Arrow, 1974), or as one large organisation (Arrow, 1964; Hurwicz, 1987), while others consider markets to be institutions where consensus over prices and qualities is established (McMillan, 2002; Hodgson, 1999), or a specific "institutional arrangement" or "governance structure" where a large number of voluntary transfers of property rights take place (Williamson, 1991; Menard, 1995). Clearly, the definition of the market is still confusing. Indeed, Menard (1995) considers it "paradoxical how variously and vaguely defined the concept of the market is".

Some of the perspectives mentioned above partly capture the thinking about markets under the neoclassic economics paradigm, in which the market is pictured as an interaction of supply and demand but free of any institutional structures. Simply reduced to a price-making mechanism, the market serves more as a theoretical construct than as a characterisation (or concretisation) of the actual exchange process. New Social theorists (Granovetter, 1985; Swedberg, 1994; Fukuyama, 2002) have challenged this notion of the market, arguing that they consist of more than an act of exchange. They see the market as a specific type of social structure which offers a continuous and extended range of social interaction. This means that economic action is embedded in non-economic networks, institutions and relations and that market transactions occur only within an already institutionalised setting. This model assumes that the market is composed of a network of buyers and sellers engaged in competition as well as exchange. Therefore, exchange assumes a wider context in terms of prices, competition and market culture, which are socially constructed, and can involve different elements depending on the applicable social norms, habitual routines and established institutions.

New Institutional Economics and, in particular, the discipline of transaction costs have brought the understanding of markets closer to reality by taking up this idea and pointing out that exchange between economic actors in markets is costly and institutions are required to lower this cost. From this perspective, institutional constraints are added to the neo-classical market model. To work as they should, markets require new or modified institutions to resolve institutional constraints.

From the new institutional perspective, markets are therefore regarded as institutions that shape the behaviour of actors. Both formal rules, including laws, policies, constitutions, contracts and treaties, as well as informal rules, resulting from established customs and conventions concerning norms of behaviour and trust, facilitate coordination or govern relationships between individuals or groups (World Bank, 2003). By providing for more certainty in human interaction, institutions have an influence on the behaviour of actors and therefore on outcomes such as economic performance, efficiency, economic growth and development (North, 1990). From Menard's (1995) viewpoint, institutions establish and delineate the conditions under which goods are produced and exchanged. Hurwicz (1987), on the other hand, provides a more restrictive definition of institutions by defining it as an information mechanism that coordinates the actions of different agents. Hurwicz's definition underscores the critical point of departure between neoclassic

economic theory, for which only price coordinates the behaviour of actors, and neo-institutional economics, according to which the behaviour of actors is coordinated by institutions.

Davis and North (1971) have successfully distinguished between "institutional environment" and "institutional arrangements", a distinction later extended by North (1991, 1994). According to these authors, the institutional environment refers to the set of fundamental political, social, and legal grounds that establish the basis of production and distribution. In other words, the institutional environment is the broader set of institutions in which transactions occur. The institutional arrangements are, on the other hand, the "arrangements between economic units that govern the ways in which these units can cooperate and/or compete" (Williamson, 2000). They are in other words the contracts or arrangements set up for particular transactions, also referred to as "governance structures". They can be regarded as a means by which to infuse order into a relationship where potential conflict threatens to undo or upset opportunities to realise mutual gains (Williamson, 2000).

Ostrom (1998) sees the market as a place where different actors (buyers and sellers) encounter each other to perform transactions. Basically, this point of view is close to the idea of markets as a public gathering space for buying and selling, as previously indicated. However, Ostrom (1998) also incorporates the idea of social interaction into her conceptualisation of markets, specifically through introducing the market as an "action arena", defined as the social space(s) within which individuals interact, exchange goods and services, solve problems, dominate one another, fight or compete. Action arenas include both an action situation as the actors within it (Ostrom, 1999a). The structure of an action situation is identified according to various situation variables, such as the types of participants, their positions, possible actions, information, and outcomes. Preferences, resources, information-processing capabilities and selection criteria characterise actors, understood as being goal-oriented but also fallible learners with limited resources and cognitive capacities, functioning in uncertain environments (Ostrom, 1999b). Action situations and actors then form the action arena, which is framed and constrained by contextual variables, such as the physical and material world within which the actors interact, the attributes of the community, and the formal rules and informal norms that define the "rules-in-use". These exogenous constraints jointly affect the types of action that individuals can take, the benefits and costs of these actions, and the (likely) outcomes resulting from them (Ostrom, 1999b).

Trying to bring together all the above perspectives, Kyeyamwa (2007) proposes in his work on livestock markets in Uganda to conceptualise markets as depicted in Fig. 9.1. In the centre is placed Ostrom, Gardener, and Walker (1994) actors' arena, embedded in the wider institutional environment that influences which institutional arrangements are possible. These, in turn, direct the incentives confronting actors and their subsequent behaviours. Hence, the market is nested in a structure of rules within rules, guiding the interactions and decisions of actors. Given a set of exogenous constraints, actors within an action arena consider the

costs and benefits of various behaviours and act according to their personal preferences, expected benefits and perceived incentives. The aggregate patterns of interaction lead to outcomes with which market institutions can then be evaluated according to relevant criteria (e.g., efficiency and effectiveness). Outcomes dynamically feed back to both the action arena and to higher institutional levels, potentially causing pressure that will ultimately change the rules in use or the contextual variables, hence feeding back to change perceived incentives within the action arena. In essence, self-enforcing institutional change is a continuous process of adjustment across these nested levels of contextual variables, always trying to find the most optimal outcome. Institutions provide the micro-foundations of behaviour while, at the same time, players shape institutions through their strategic interactions (Mittenzwei & Bullock, 2004). From this perspective, the market is circumscribed by a nested set of institutions that are in equilibrium at any given time as a consequence of "repeatedly played games" between the stakeholders who are active in the action arena.

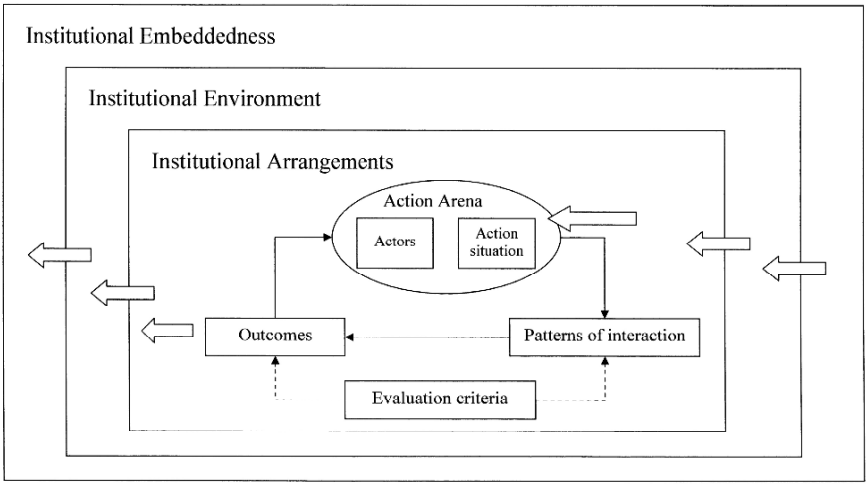

Fig. 9.1: A conceptual nested market model (based on Kyeyamwa, 2007)

In summary, the market model described assumes markets to be a social construct in which transactions are coordinated by mechanisms beyond the neoclassical price mechanism. In the action arena, model actors receive incentives for cooperation, more specifically through the reduction of transaction costs. Mechanisms used for coordination are the result of social interaction. This market model also acknowledges that ongoing networks of social relations between people discourage fraud. People guide their choices based on past interactions (experiences stored in memory) with other actors and continue to deal with those they trust. Eventually, positive experiences and mutual trust may even yield preferred supply-demand relationships, which may allow even further reduction of transaction costs. In this way, economic exchange needs to be looked at as a social exchange

process. Levels of trust have effectively been shown to have an important influence on transaction costs in economic relationships (Platteau, 2000).

Within the nested market framework, actors make choices based on their own preferences, the costs and benefits that they assign to alternative actions and outcomes, and strategic considerations (i.e., expectations concerning the behaviours of others). One of the possible choices can be to become part of a given market arrangements or to establish new arrangements. Actors respond both individually and as members of groups, according to the ways in which different strategies impact on them collectively and individually. The patterns of interaction represent the collective choices and decisions made by individuals in response to physical attributes and institutions (Alavalapati & Mercer, 2004).

9.3 Hybrid Governance Structures

Transaction Cost Economics (TCE) posits that, within the above-explained nested market system, a governance structure will be chosen in order to economise on transaction costs. Governance structures, such as information centres, contracts, networks, bureaucracy, cooperation or markets, are organisational solutions for making institutions effective; they are necessary for guaranteeing the rights and duties of actors involved and their use in transactions, which themselves differ in their attributes and are systematically aligned with different governance structures. Transactions differ in the degree to which relationship-specific assets are involved, the amount of uncertainty about the future and about other parties involved, the complexity of trading arrangements and the frequency with which such transactions occur (Williamson, 1985, 2004). According to these arguments, governance structures are developed to improve the functioning of transaction markets and can be presented along a continuum. At the one end of the spectrum, we find pure, anonymous spot markets, in which market prices provide all relevant information and competition is the main safeguard. Adaptation to changing market conditions is guided individually and incentives to maximise profits are high. At the other end of the spectrum lies the fully integrated arrangement or hierarchy. Hierarchies mitigate risk, but provide only weak incentives to maximise profits, while also incurring additional bureaucratic costs (Boger, 2001). In between the market and the hierarchy are hybrid governance structures. This continuum of governance structures introduces two important issues. First, when transaction costs increase (or decrease), a different governance structure may be optimal for carrying out the transaction. Second, such a shift in governance structure has attendant costs. These factors are important, because they represent the conditions under which institutional choice and institutional change may occur.

Menard (2004) argues that in real market situations hybrids are more the rule than the exception (spot markets and firms are the extreme cases). Hybrid governance structures are characterised by actors with autonomous property rights, but

who have transferred part of these rights to the transaction partner. Property autonomy elicits strong incentives, but at the same time the agreed coordination between partners, implying the transfer of property rights such as exploitation or allocation rights, attenuates incentive intensity. Menard (2004) identifies three common characteristics for all hybrids:

1. The partners in a hybrid governance structure pool (part of) their resources and their strategic decision rights, but at the same time keep the majority of their property rights and their associated decision rights distinct;
2. The relationships between partners are regulated by contracts, but these are in general incomplete and not tailored to suit the particular purpose; and
3. Competition persists between the partners in a hybrid as well as between hybrids and alternative organisational forms.

The mechanisms that can be deployed for coordination and safeguarding are – in increasing order of authority – information systems, contracts, external regulation and, finally, formal organisation. According to Menard (2007), hybrid organisations will develop if the benefits of coordination outweigh the costs or, in other words, if there are cooperation rents to capture. However, usually the higher the advantages of coordination, the higher the costs for organising it will be (e.g. because of the need for higher safeguard mechanisms to avoid free riding by actors who are attracted by the appealing benefits without accounting for a share of the costs), and so the more centralised the coordination mechanisms used will be, implying higher governance costs. A consequence of this is that different hybrid structures co-exist in practice, depending on the benefits of coordination.

Menard (2007) identifies four key mechanisms of coordination, each exercising different degrees of authority:

1. Information devices
   These are used in cases of asymmetric information between partners. Information devices are usually bi-directional: amongst partners and as an interface with the external environment (e.g. labels).
2. Contracts
   Contracts have always had a significant role in cooperation and collective organisations, but their role has been overstated, overlooking the problem of incompleteness and the need for adaptability in a changing world. Neo-classical contracts are typical for hybrid organisations; these are conceived as self-enforcing mechanisms that can be formal or informal and as facilitators for organising the relationship between partners.
3. Exogenous regulator or monitor
   Incomplete contracts and/or an exogenous impulse to cooperate are motives for the establishment of exogenous monitoring. A distinction can be made here between monitoring initiated and carried out by public authorities, private monitoring initiatives and a combination of public and private monitoring (e.g. a

private certification body that is recognised by the government to perform certain controls).

4. A governing body of its own
   The final coordination mechanism is the establishment of a formal framework within which contracts are initiated, negotiated, monitored, enforced and terminated. This entails the building of a formal authority, can take different forms and involves a significant degree of centralisation, formalisation and control over property rights.

One form of hybrid organisation consists of relations of trust, meaning that decisions are decentralised and coordination relies on mutual "influence" and reciprocity, mainly based on information exchange and peer review, such as in the case of farmers selling at weekly farm markets obeying certain loosely defined rules of conduct. Van Huylenbroeck (2003), based on the work of Verhaegen and Van Huylenbroeck (2002), describes this as a framework or open group form of governance. At the other end of the spectrum, we find hybrids close to integration, with tight coordination through quasi-autonomous governing bodies or "bureaus", sharing many attributes of a hierarchy. Menard (2004) calls this formal government, such as in the case of a new formal organisation owning a brand name. In between these polar cases, we find mild forms of "authority" based on relational networks or on leadership. Relational networks mainly rely on tighter coordination than trust, with formal rules and conventions based on long-term relationships, complementary competences, and/or social "connivance" (Powell, 1990), such as relationships seen in cooperatives. Van Huylenbroeck (2003) calls this coordinating governance. By contrast, hybrids known as leader governance (Menard, 2004) or captain-of-channel strategies leave little room for autonomy, such as with franchising or contracts imposed by retailers.

9.4 Extension to Public Good Markets

So far the theory on hybrid governance structures has mainly been developed for private good markets. However, in the context of the proposed market model illustrated by Fig. 9.1, we can easily extend this theory to public good markets in which the market is seen as an action arena occupied by a public body demanding services and private agents able to provide them. In this case also, hybrid structures may be a tool to improve the functioning of the "public" market. Two main differences between private and public markets are important, however (Rangan, Samii, & Van Wassenhove, 2006). The first is that there are benefits (positive externalities) generated for third parties not directly involved in the transaction (e.g. citizens in agri-environmental schemes). In such cases, it is well known that, because of individual rationality (oriented toward maximum private benefits at minimum private costs) and the nontrivial governance costs of collective action

(i.e., fair allocation of costs among all potential beneficiaries and enforcement of sanctions against free riders), public "goods" tend to be underprovided. This calls for public actors to step into the market. The second difference is the position of public actors, which are different from private actors in the sense that they have more legal authority, which can be used to change the institutional environment as a tool for shaping and regulating the behaviour of other actors.

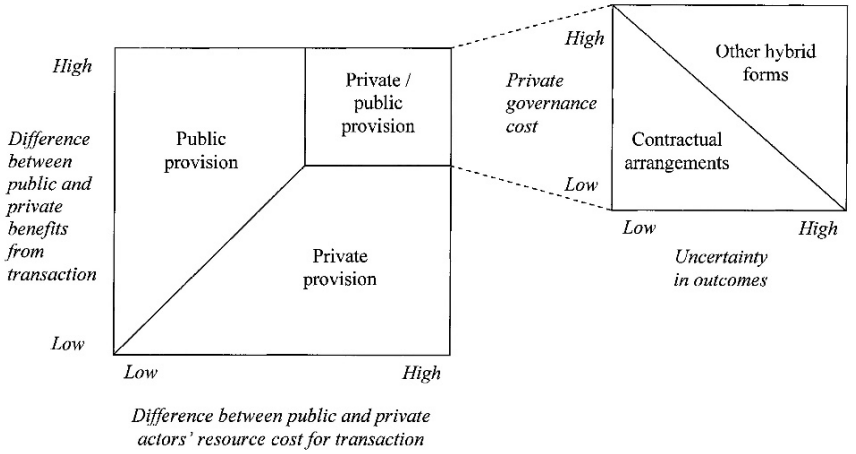

Fig. 9.2: Conceptualisation of the choice between public, private or public-private action (adapted from Rangan et al., 2006)

According to Rangan et al. (2006), it is important when bringing public actors and public benefits into the analysis not to contrast private-resource costs against governance costs, as is done in traditional transaction cost economic analysis, but to trade-off the difference (wedge) between public and private benefits, on the one hand, against the difference in public and private resource costs for making the transaction possible, on the other. They show, based on the model represented by Fig. 9.2, that when public benefits are relatively high and public resource costs relatively low, public action is the most economical strategy (e.g. pure nature conservation, such as in cases with low operational costs to maintain a reserve). In case of the opposite result, private market creation will be most appropriate. In the latter case, the role of public authorities can be reduced to providing the required legislative rules, changing the institutional environment. Illustrative cases here are tradable permits to regulate CO_2 or manure production or common pool resources, such as access to fisheries. In these cases, the public transaction and coordination costs of public governance would be far too high compared to the public benefits to be gained. By providing a legislative constraint on the amount of resources available or the amount of externalities that may be produced, and by providing an initial division of resource rights, a market institution can be created.

However, when there are both high positive externalities involved as well as high public resource costs relative to private-actor resource costs (e.g. in nature

conservation practices implying highly specific agricultural methods or in irrigation schemes), partnerships between public and private actors will be optimal. Public actors want to get involved because of positive externalities and the great potential public benefits, but they will be hesitant to get involved alone, because the effectiveness and efficiency implications indicate otherwise. Private actors, on the other hand, will be reluctant to invest in such transactions by themselves because, while they might have resource (i.e., cost) advantages, they do not have the governance advantages required to close the public-private wedge and to adequately reap positive net benefits.

It is in the latter case that we can expect to see constructive partnerships, that is, active alliances between private and public actors. These public-private governance relationships can take different forms. As long as there is low uncertainty and private governance or transaction costs are perceived to be not too high, contracts will be the most adequate governance structure. Illustrative for this situation are agri-environmental contracts for rather simple conservation practices, such as maintaining hedgerows or other landscape elements. In such cases the governance cost and uncertainty can be kept low: payment for a direct service that is easily observable. However, in cases where private governance costs are high and there is also high uncertainty about private benefits – because, for example, there is a need for specific technology or knowledge or complex interactions with other providers – there is scope for other governance structures.

For such cases, we may think about more advanced hybrid governance structures such as trusts, user associations, cooperatives, private or public agencies and other intermediate structures to lower transaction and governance costs. In particular for transactions that require highly specific knowledge, technology and/or investments, such elaborated hybrid structures for public-private coordination will be more efficient than working on an individual contractual basis. Examples of such institutional arrangements include water user associations for the management of irrigation schemes (Herrera, 2005), environmental cooperatives for agri-environmental conservation (Slangen & Polman, 2002) and private-public organisations for the protection of property rights of genetic resources and biodiversity (Van Huylenbroeck & Espinel 2007).

Following the work of Williamson, Bougherara, Grolleau, and Mzoughi (2007) provide us with a first attempt to systemise public governance structures, seeking to classify regulatory instruments for environmental policy: based on measurement problems, on the one hand, and required safeguards on the other. They argue that, with raising measurement problems and desire for safeguards, more regulatory instruments will be used, while in cases where measurement costs and risks are low, contractual approaches will be preferred. However, although their analysis is a good first attempt, it is flawed because (1) they focus only on the role of the state to mitigate negative externalities and (2) in our opinion they neglect the possibility of hybrid forms in which private stakeholders organise themselves to contract with the government as well as the possibility of public-private investment agencies or collaborations.

Another indication that we need more systematic research on alternative public-private governance structures is given by Ducros (2007). In her analysis of agri-environmental schemes, based on contract and principal-agent theory, she proves that in cases where the principal (public authorities) is in a situation of high asymmetric information and uncertainty (leading to high public coordination costs) and farmers face high specific investments, individual agri-environmental contracts are not very successful. This is demonstrated by comparing the low uptake of this kind of contract with the greater uptake levels of rather simple measures, such as buffer strips and field margins, which involve low uncertainty in terms of outcomes and low specific investments, unlike individual contract measures requiring more specific knowledge (e.g. botanical management), highly specific investments (e.g. mechanical weeding) or complex interactions (e.g. late mowing). In such cases, governance structures based on cooperation among farmers (e.g. a contracting cooperative that makes specific investments and is paid from the individual payments farmers receive) would facilitate market development.

Hybrid governance structures will be advantageous in particular in cases where either (1) different stakeholders possess specific assets which need to be pooled in order to make the transaction possible or (2) when the public service requires highly specific investments which are impossible for individual stakeholders and where only a pooling of available resources makes the investment, and thus the transaction of the public good or service, possible. An example of the first category is the maintenance of a typical regional landscape for which it does not make sense to make individual contracts with farmers, as the value of the measure lies in the combination of different farm types, crops or practices. In such cases an intermediate structure is needed in which the rules (in Ostrom's sense) are negotiated and fixed. An example of the second category is investment in irrigation installations or machines for maintenance of hedges which are too costly for individual farmers and where water user associations or environmental cooperatives may be the ideal intermediary, and thus hybrid, structure.

The systematic analysis of hybrid governance types for public good markets is certainly still an underdeveloped field of research. That is why this chapter has not been able to undertake a full characterisation or classification of these types, but only provide some examples. A way forward for research would be to formulate a systematic categorisation of these structures, the involved stakeholders (private actors and/or public agencies), the legal entities formed, their motivations and so on. We propose to use a conceptual framework similar to that developed by Menard (2007) for classifying and evaluating hybrid governance structures in private good governance. This framework proposes distinguishing between two types of elements. On the one hand, it considers (see Fig. 9.3) the drivers for the development of hybrid governance structures, including the mutual dependency of stakeholders, (measurement) uncertainty about outcomes, expected social gains from transactions and so on. On the other hand, it looks at elements influencing the kinds of partnership and governance structures that can be formed, such as the existing

institutional environment, path dependency (existing governance structures), asset specificity for necessary investments, expected rents and necessary safeguards for their protection or division among actors, consequential uncertainty and so on.

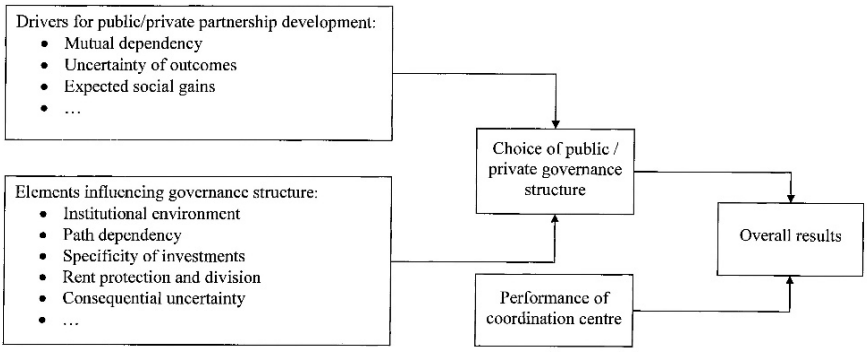

Fig. 9.3: Conceptual framework for the analysis of public-private hybrid governance structures (based on Menard, 2007)

Based on the theory of hybrid governance and the specificities of public goods, we may regroup hybrid institutions for public goods according to the same four categories outlined in Section 9.3, with the following specifications:

1. Information devices: hereby the coordination centre only provides information for coordination of the actions of individual actors, with the objective of achieving higher overall performance than would be the case with uncoordinated actions. Although the public authority may give some regulatory power and support to the coordination centre in order to stimulate coordination efforts, there is no, or only a very slight, shift in property rights to the coordination centre itself. Examples here include regional landscape centres for landscape maintenance and protection, natural parks, water protection areas.
2. Contractual arrangements: hereby the coordination centre remains a state body that makes individual contracts with private actors who can render a service to society. Classic examples include agri-environmental contracts, but also the attribution of tradable or non-tradable quotas, such as for fishing, can be considered in this category. All property rights not regulated by the contract remain in the hands of the individual actors
3. Exogenous regulator or monitor: hereby the state uses an external (private, or public-private) body as an intermediate body for coordinating the actions of individual actors. This intermediate body can take the form of cooperatives (agri-environmental cooperatives), associations (water user associations), or a private or state body regulating the trade in CO_2 or fishing quotas or any other legal form. This body receives from the state authority the regulatory and incentive power and instruments (mostly on a contractual basis) to regulate, coordinate and monitor the actions of its members or those actors that fall under its power.

In most cases, membership or entrance in a coordination system remains voluntary, but, once entered, individual actors are highly bound by the rules of the exogenous regulator. However, the individual actors keep a great part of their property rights.

4. A governing body: in extreme cases the governing authority can decide to pass all legal power to a new public, private or public-private body, which receives juridical and other power. Different from the previous coordination instruments, adherence to rules is more mandatory and there is a great shift in property rights to the governing body. Examples include natural parks (or similar devices), where a state-installed authority receives the power to manage the park and most of the relevant property rights (e.g. on the land), or a polder council that receives authority over dams in lowland areas near the seaside to regulate water levels in order to avoid floods and so on.

When evaluating the outcomes of different governance structures for public goods it is of course important to also take into account the performance of the "coordination centre". Indeed the final result of a certain governance structure will also depend on how well the coordination centre formed out of hybrid governance arrangements performs its tasks. As already explained, a coordination centre can take different organisational and legal forms, depending on the tasks allocated to it and the legal environment in which it operates (see the examples above). Therefore, as also indicated by Rangan et al. (2006), the valid calculus for the choice on a governance structure will depend on the presence, breadth, and quality of the ambient institutions of governance – including norms and laws regarding private property, courts, enforcement units and, last but not least, markets – as perceived by the private actors contemplating the focal transaction. In a place or time where ambient institutions of governance are not well developed, private willingness to engage will be perceived as low and the public-private wedge as large.

Finally, as also described by Hanisch (this volume), all these hybrid structures can co-exist within a so-called polycentric governance system consisting of different public and private actors and hybrid networks used to coordinate the transaction. In such cases it is important to analyse the mutual relations, competition, influence, and conflicts among the different structures to understand the spectrum of outcomes of the overall governance structure.

Another aspect to take into account here is the degree of centralisation or decentralisation, both at state level as well as within hybrid governance structures, because this may influence overall transaction costs, as explained by Birner and Wittmer (this volume). Here a trade-off will exist between the capacity of the central level to economise on regulatory costs (because of economics of scale) and the more precise regulation possibilities of decentralised structures, which gain in importance the higher the diversity of the transactions at stake.

9.5 Conclusion

Understanding the functioning of private and public markets requires a comprehensive conceptualisation of markets themselves. The framework presented here views the market as an action arena, nested in a set of institutional structures that directly constrain and guide the behaviour of actors.

The comprehensive model makes it possible to understand why hybrid governance structures may contribute to the proper functioning of markets, both private and public. It helps indeed to understand that coordination among stakeholders may help to lower the transaction costs in an action situation where individual actors do not have all specific assets to make the transaction possible, do not have sufficient resources to make the required investments in specific assets, or face too much uncertainty about the outcomes. Depending on the amount of pooled assets or resources, uncertainty about the outcomes and required safeguards to protect individual interests, different types of hybrid governance structures will emerge. In cases where the required amount of pooled specific assets and uncertainty and safeguards are low, only very loose coordination centres will be necessary (such as an information centre), while in cases where the amount and role of specific assets increases and uncertainty and required safeguards gain importance, more coordination will be required and, thus, also stronger forms of relationship. We are convinced that using an enlarged concept of markets and an extension of the hybrid governance concept to public markets can contribute to the further development of Hagedorn's "institutions of sustainability" concept and the better understanding of governance structures for public good markets. We have argued that markets should not be conceptualised as places of pure exchange, but rather as social structures in which exchanges or influences on actors' property rights take place. Within these social constructions, hybrid governance arrangements help to foster better allocation of public goods and their development. We therefore recommend a more systematic theoretical and empirical analysis of the role of hybrid governance structures in public markets in future research.

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