

Collusion in the Dutch construction industry: an industrial organization perspective

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Several investigations by parliament, cabinet, justice and antitrust authorities have shown a widespread use of cartels and structural bid rigging within the Dutch construction industry. The reputation of the Dutch construction industry has been dented with both the general public and clients. As a response, the Netherlands' parliamentary inquiry Committee on Construction Fraud adopted the guiding principle of 'competition is good' and urged the restoration of the proper functioning of the market. The proposed default approach to public sector procurement is design–bid–build with public tendering and selection of the lowest price. A concise overview of the investigations is provided, relating the collusions and their persistence to emerging insights from the field of industrial organization theory into underlying factors and causes. A tougher public sector procurement policy and the continued reliance on lowest bid prices may not contribute to the reform of the Dutch construction industry as intended. One-dimensional, price-oriented competition only provides a static, project-based efficiency. However, it neither addresses a number of organizational issues nor resolves the underlying pressures leading to collusion. An alternative approach allowing for a balance of competition and collaboration with a wider number of selection criteria variables would create a more dynamic, iterative competitive process over a longer timeframe and would develop an innovative, efficient and profitable industry. Although the inquiry committee acknowledges these new methods of procurement, it is expected that the overriding ambition to restore proper market function (through increased competition) will steer towards the more traditional procurement approaches.

Keywords: business systems, cartels, collaboration, collusion, construction business system, contractors, industry reform, public sector procurement, the Netherlands

Plusieurs enquêtes menées par l'Exécutif, des cabinets d'avocats, les autorités judiciaires et les autorités chargées des lois antitrust ont démontré que l'industrie hollandaise de la construction utilisait énormément les cartels et les soumissions frauduleuses. La réputation de l'industrie hollandaise de la construction a été montrée du doigt par le grand public et par ses clients. Pour remédier à cette situation, la Commission d'enquête parlementaire des Pays-Bas sur la fraude dans la construction a adopté le principe directeur selon lequel la concurrence est saine et a insisté pour que soit rétabli le bon fonctionnement du marché. L'approche par défaut proposée en matière d'approvisionnements du secteur public repose sur la trilogie "conception–soumission–construction" avec appels d'offres publics et sélection du moins disant. Cet article fait un exposé concis sur ces enquêtes et établit le lien qui existe entre les collusions et leur persistance et une connaissance intuitive qui émerge du domaine de la théorie de l'organisation industrielle en ce qui concerne les causes et les facteurs sous-jacents. Il n'est pas certain que le durcissement voulu de la politique d'approvisionnement du secteur public, tel qu'il est proposé, et la sélection systématique des moins disants contribuent à la réforme de l'industrie de la construction hollandaise. La concurrence unidimensionnelle, axée sur les prix, ne débouche que sur une efficacité statique, basée sur les projets. Cette solution ne permet toutefois pas de résoudre un certain nombre de problèmes d'organisation ni d'alléger les pressions sous-jacentes qui conduisent à la collusion. Une autre approche permettant d'équilibrer la concurrence et la collaboration avec un plus grand nombre de variables de critères de sélection devrait aboutir à un processus plus dynamique, itératif et concurrentiel dans le long terme et devrait favoriser l'innovation,

l'efficacité et la rentabilité de cette industrie. Bien que la Commission d'enquête prenne acte de ces nouvelles méthodes d'approvisionnement, il est probable que l'ambition de rétablir le bon fonctionnement du marché (concurrence) s'orientera vers les méthodes d'approvisionnement plus classiques.

Mots clés: systèmes commerciaux, cartels, collaboration, collusion, système commercial de la construction, contractants, réforme de l'industrie, approvisionnement du secteur public, Pays Bas

Introduction

In 2002, the procurement of construction work in the public sector became a major issue in the Netherlands. Never before had so much money and effort been put into uncovering the (mal)practices in public sector procurement. In November 2001, a national television channel had shown a documentary providing evidence of collusive behaviour, bid rigging and corrupt practices among construction companies and civil servants (VARA, 2001). The media suggested that these malpractices robbed the taxpayer of about €0.5 billion each year. This claim resulted in a political controversy and led to extensive investigations by the Cabinet, the Department of Justice and the Dutch Competition Authority. Furthermore, it gave rise to a parliamentary inquiry. A central theme in all the investigations was the spread and effect of cartel structures. The investigations and allegations have had a major impact on trust, and the relationship between public sector clients and the construction industry.

In the present paper, the investigations and results of the parliamentary inquiry will be briefly described. Although the final report of the parliamentary inquiry indicates several directions and recommendations for improvements in the construction industry and public sector procurement, this paper focuses on an analysis of the collusion and the recommendations to restore the proper functioning of the market. Restoring the proper functioning of the market is one of the primary objectives of the parliamentary committee. It adheres to a 'competition is good' vision and propose tougher public sector procurement. Will this strategy work? Tougher procurement is an interesting strategy choice since, for example, in the UK, lowest price selection is strongly discouraged (NAO, 2001; Strategic Forum for Construction, 2002). Can this trust in competition – as the cleansing mechanism – be justified? How will the construction industry – as a business system – react to this tougher procurement procedure? To answer these questions, a closer look is taken at the exposed collusions in an attempt to uncover some clues about the mechanisms beyond the spread and persistence of the collusion practices. This is followed by a consideration of a mounting debate on competition policy in the field of industrial organization theory. When looked at from the evolutionary economics' perspective, the neo-classical 'competition is good' ethos seems to lose momentum. The collusion practices and proposed tougher procurement procedures are discussed in the light of this competition policy debate. Given the developing theory, the assertion that tougher

procurement regulations will reform the construction industry seems unconvincing. The paper ends with some concluding remarks and outlooks on the developments in the Netherlands.

Exposing cartels and bid rigging

A television programme, broadcast nation-wide, entitled *Fiddling with Millions* (VARA, 2001) sparked a political controversy in the Netherlands. It made serious accusations about the construction industry and its public sector clients, and presented two employees who reported corporate violations from the construction industry. These 'whistleblowers' produced a copy of elaborate financial accounts showing illegal cartel practices. These documents or *phantom* accounts, which were the starting point for the unravelling of the paper trail, consisted of over 250 A3 pages covering some 3500 projects. For hundreds of these projects, it was noted how much compensation the winning contractor had to pay the 'unsuccessful' competitors. All the bids had been 'adjusted' (i.e. rigged) so that the outcome of the tendering process was inevitable. A Member of Parliament, who was interviewed in the course of the broadcast, expressed astonishment at the illegal practices documented.

Other sections of the media took up the issues raised by the programme. The strength of feeling expressed by the Member of Parliament led to a conflict within his political party. In a matter of weeks, it escalated into investigations by the Cabinet, by the Competition Authority and by the Department of Justice, and led to a public inquiry by Parliament itself. The aims of the inquiry were captured in four key issues:

- establishing the nature and extent of irregularities in the construction industry
- unravelling the structural causes of the irregularities
- evaluating the role and performance of public sector clients
- evaluating the role of the public authorities as justice and antitrust authorities

Given the suspicion of cartels being operated, the Dutch Cabinet initiated a more in-depth investigation into the procurement practices of four ministries: Traffic and Transportation, Housing, Defence, and Agriculture. PriceWaterhouseCoopers (a management/business consultancy) in conjunction with Haskoning (an

engineering consultancy) analysed 394 projects procured between 1996 and 2001 with a total contract value of €6.8 billion (PWC, 2002). Only larger projects were selected, of which 77% were for infrastructure (90% of the total contract value). The Ministry of Traffic and Transportation procured 64% of all projects, amounting to 89% of the total turnover. CapAnalysis (a management/business consultancy) analysed the 100 largest public contracts awarded between 1998 and 2001, with a total value of €5.7 billion (CapAnalysis, 2002). Again, the data were skewed towards infrastructure projects. Bereschot (2002) investigated compliance with procurement legislation, rules and codes of conduct, and looked at the internal procedures and affairs of the four ministries. The studies show that public tendering procedures and selection based on the lowest bid were indeed the preferred public sector procurement approaches. Even in the event of 'best value' selection, in most cases lowest cost still decided which company was awarded the work. It would seem that the criterion of best value was set to justify opening up all the bid documents. In 20% of the projects, the contractors would offer an alternative solution, but only in 3% of the projects would the client select this alternative. In 59% of the projects, the lowest bid was below the client's estimate; in 41% it was above the client's estimate. In 36% of the projects investigated, the contract was eventually awarded at a lower cost than the lowest of the initial offers. Six per cent of the projects ended up at the court of arbiters. Half of these disputes were about the selection criteria.

While the studies were ongoing, in March 2002, over 500 police officers, fiscal investigators and prosecutors invaded companies, agencies and the homes of those suspected of being involved in over 50 locations. It was the largest invasion in Dutch legal history. Between 22 August and 27 September 2002, the Parliamentary Inquiry Committee publicly questioned around 45 people. These interviews were shown live on television. By then, it had become clear that cartels and collusion were structural and widespread in the Dutch construction industry. Not all sectors of the industry were affected to the same extent. For infrastructure projects in the road and earthmoving sector, all the bidding companies were involved, and cartels had been involved in virtually every project. To the surprise of the Committee, the same was also true in the heating, ventilation, air-conditioning (HVAC) sector.

Although the investigations typically focused on the procurement behaviour of national public clients, local public clients were also under suspicion. Earlier research into the Dutch municipalities' procurement approaches had shown that client–contractor relationships were often recurrent, with reputation being an important criterion (Ferguson *et al.*, 1995). Nevertheless, the procurement policies of local authorities were beginning to change towards a more competitive approach (Lourens, 1995). However, only 2–3% of projects saw

the formation of new client–contractor relationships (Dorée, 1997). The continuity of client–contractor relationships could be justified as being economically rational, based on transaction cost economics. Regular trading that signals and supports the intention of continuity has been posited as a way of reducing the likelihood of opportunistic behaviour (Williamson, 1985). Contractors are motivated by the potential of future work rather than by the stick of legal action (Dorée, 1997). Moreover, at the local level, policies and knowledge about procurement processes are relatively underdeveloped (much in line with that described for England by Holt and Proverbs, 2002). The high rate of recurrent contracts in local procurement practice was suspected to be the result of over close relationships, which were vulnerable to corruption and collusion.

In the course of the investigation, the contractors' association gradually admitted that, in certain sectors, contenders consistently met shortly before they submitted their bids. However, it insisted that this practice had not led to higher prices than would have been achieved on a competitive basis.

On 12 December 2002, the report of this inquiry (PEC, 2002), amounting to over 3000 pages, was presented to Parliament and the press. The early allegations of corruption were not substantiated, but rigorous efforts were called for to end the omnipresent culture of 'winning and dining'. It was also concluded that the government had neglected its responsibilities and had failed to draft a consistent policy for the construction industry. Procurement regulation also fell short of what was required. Policy and procurement regulations were described as 'blankets of patchwork'. The report confirmed the structural nature of cartels and bid rigging. During the presentation of the report, the Chair of the Committee suggested that increased prices for profitability (mark-ups) by the cartel were 8.8%, although no hard evidence could be produced to substantiate this allegation. Many questions were raised over this 8.8%, but (revealingly) the association of contractors made no attempt to deny the existence of the cartels and bid rigging. The exposed collusion practices were acknowledged as a fact. Not even the conclusions on their structural nature were challenged.

Inner workings of the collusion

Collusions and cartels are viewed by most authorities as the single most serious violation of competition laws (OECD glossary, 1999). In a broad sense, *collusion* refers to the illegal behaviour of competitors in coordinating their market behaviour to restrict competition:

combinations, conspiracies or agreements among sellers to raise or fix prices and to reduce output in order to increase profits.

(OECD glossary)

Bidders attempt to suppress rivalry and capture some of the gains that would otherwise be transferred to the seller. Collusive behaviour had already been acknowledged as a market strategy by the economist Adam Smith (1776):

people of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.

Although collusion in the construction industry is not extraordinary (McMillan, 1991; Zarkada-Fraser and Skitmore, 2000; Gupta, 2001), the Dutch collusion scheme seems to be exceptional in its scale, durability and the way it was institutionalized. In the roads and earthworks sector, the collusion seems to have covered virtually all contractors (both large and small), and all projects where two or more contractors were asked to put in a bid. Such a scheme had been in operation for at least 15 years. The paper trail even showed that specially developed standardized forms and envelopes were being used. The system also incorporated a private arbitration structure.

Zarkada-Fraser and Skitmore (2000) refer to collusive tendering practices and discuss activities such as communication with other bidders, bribery, withdrawal, artificial inflation of tender prices and cover pricing. They place the individual centre stage and focus on the moral content of the colluders in the construction industry. The present paper takes a different stance by focusing on the mechanisms, and sustaining, of the collusion. The basic structure of the system exposed in the Netherlands is quite similar to the *dango* price-fixing system in the Japanese construction industry described by McMillan (1991): negotiations among bidders for Japanese public works' contracts to decide which firm would get the job.

The text below describes the general structure of the collusion. In reality, several variations, especially regarding the rules and procedures in the price-fixing meetings, coexisted. Unravelling the inner workings of the Dutch collusion system was performed as an MSc dissertation supervised by the author (Van den Beulien, 2003). The information was gathered by studying documents and interviewing people involved in the collusion and who had actively participated in the system. The mechanisms were mapped in causal relationship diagrams.

In the Dutch collusion system, all the firms involved had an individual *claim account*. Adjustments to these claim accounts were recorded through *phantom* book-keeping. When a project was open to offers, a special meeting would be arranged shortly before the contractors had to submit their bids. In this meeting, the contractors would resolve who would put in the lowest bid and how high this bid would be. This meeting in fact

was an auction, where each contractor had to make known how much it was prepared to pay to the others in order to win the contract (using closed bids). The contractor offering the highest compensation would be entitled to *win* the formal tendering procedure. The price to be tendered by the successful bidder was decided upon and the 'unsuccessful' companies would submit higher tenders. To compensate the 'losing' companies, the 'winner' would transfer the agreed amount from its claim account to those of the other contractors. In practice, each company would modify its own account book and often the outcome would be passed on to a central registration office.

The accounts were expressed in Dutch guilders, but the contractors rarely exchanged real money. A contractor's claim account would accrue over time but then be reduced whenever a project was *bought*. The individual contractors tried to keep their claim accounts balanced. Since there was not one large cartel but a conglomerate of dozens of national and local cartels, claim rights were also transferred through intermediate transfer accounts. Occasionally, meetings were arranged to smooth the accounts (referred to as 'clearings'). Only then would *real money* be exchanged.

Explaining the persistence of the collusion

The scale of the described collusion practices is remarkable since collusion schemes have to neutralize destabilizing forces (McMillan, 1991). The conspirators have to design and enforce rules: (1) to divide markets and profits amongst themselves, (2) to prevent members bypassing the conspiracy and (3) to prevent new firms entering the profitable market. Such rules are against the law and against normal (opportunity chasing) market activities both within and outside the conspiracy. Given these forces, how could the collusion be so persistent? What held the collusion together? To answer these questions, literature and documents have been studied and several insiders interviewed. Three perspectives are presented: market theory, cultural and legislation.

Market theory perspective

How could the collusion in the Dutch construction industry be so persistent? Academic literature suggests that the occurrence and persistence of collusion are influenced by several factors. These factors, which are relevant for the development and stability (i.e. manageability) of the collusion conspiracy, are listed in Figure 1. The far right column indicates whether or not the factor was in the literature and if it was relevant in the case. The case even yielded new factors. The literature study looked at Wilson and Lypczynski (2001), Waldman and Jensen (2000), Shepherd (1997), Nederlof (1997) and Asch and Seneca (1975). The case study comprised an examination of formal documents

and publications on the collusion in the Dutch construction industry, complemented with interviews. The middle column in Figure 1 indicates the impact of the listed factors on collusion impetus.

In the literature, collusion is often linked to theories about oligopoly. The number of firms in a market is seen as an important factor in market conspiracies. Markets with small numbers of companies are expected to be more prone to collusion. The smaller the number of market players, the easier it is to agree on the rules of collusion, to keep track of the behaviour of the individual firms and to enforce firms commitment to the rules. Smaller numbers make collusions more manageable. Given the importance of the small numbers factor, the Dutch construction industry collusion presents a puzzle since this was not a small numbers market. In the road construction sector, over 2000 firms were active. Given the difficulties of managing collusion, why then did this collusion not fall apart? The literature provides several factors that contribute to the manageability of collusions. These factors can relate to impetus, the problem of organization, the control effort and risk (outlined below).

Collusions require coordinated behaviour. The colluders have to agree on, and follow, the rules of the collusion. Drafting such rules and making them work in practice is easier where the behaviour of the buyer is fairly predictable. The predictability of client' procurement processes makes bid rigging more straightforward. A lack of product differentiation and one-dimensional competition helps colluders predict the outcome of a market process and plan it to their advantage. A lack of product differentiation and similar cost functions make it difficult for an individual firm to get

ahead of its competitors. This keeps all rivals in close competition. New entrants to a market could put a strain on a collusion, but high entry and exit barriers can help maintain a stable firm base in a market and lead to an acceptance of a *status quo* situation.

Price elasticity is also a factor that influences collusion stability. High price elasticity creates opportunities to increase the market size by lowering prices. Low price elasticity means that price alterations hardly have any effect on market size. Little is to be gained in terms of overall market size by price-cutting strategies. Likewise, raising prices will not reduce market size. Low price elasticity discourages predatory pricing and allows the raising of prices without market size repercussions.

The more stable the demand, the smoother the collusion. Strong fluctuations in demand might put a strain on the management and coherence of any collusion. However, if it is acknowledged by colluding parties that fluctuations in demand should be perceived as a risk to all, a strong collusion may find ways to absorb these fluctuations in the division of workload and price management.

Risk perception can be an impetus for collusion. Where individual firms feel they have similar high risks that can be reduced by collective action, the urge arises to talk about the risk, team up and take coordinated action. Buyers' general discontent with performance is seen as a stimulus that drives firms to concerted action. The firms will see themselves as companions linked by fate, creating a spirit of familiarity. Powerful stakeholders such as workers' unions and issue pressure groups can push firms to take collective action to counterbalance these forces. These kinds of

| Factors related to collusion | Influence | Source |
|------------------------------------------------|-----------|-----------|
| 1. Small numbers, high market concentration | + | lit, case |
| 2. No product differentiation | + | lit, case |
| 3. One-dimensional competition, price oriented | + | lit, case |
| 4. Similar cost functions | + | lit, case |
| 5. High entry and exit barriers | + | lit, case |
| 6. Low price elasticity of demand | + | lit, case |
| 7. Discontent with performance | + | lit, case |
| 8. High rate of risk and uncertainty | + | lit, case |
| 9. Asymmetric market shares | + | lit |
| 10. Powerful trade associations | + | lit, case |
| 11. Leadership | + | lit |
| 12. Mutual trust | + | lit, case |
| 13. Social homogeneity | + | lit, case |
| 14. Threat of legal sanctions | -- | lit, case |
| 15. Demand fluctuations | -- | lit, case |
| 16. High concentration of buyers | +- | lit, case |
| 17. Risk of the 'winner's curse' | + | case |
| 18. Remuneration of calculation costs | + | case |
| 19. Predictable selection process | + | case |

Figure 1 Factors related to collusion: + represents the stimulus or stabilizer for collusion, – represents the opposite to +.

'threats', coming from elsewhere than rival firms, create common interests and aims that overcome market rivalry, bringing the firms together. Trade associations, as employers associations, can take the lead in this and create a structure for cooperation and act as change agents. As such, they can unintentionally, or deliberately, support collusion.

Firms that experience high levels of uncertainty and risk may opt for consortia bidding strategies that reduce the risks to individual firms. Frequent use of consortia strategies induces familiarity and paves the way for more structurally concerted market strategies. One or two large market players can sometimes set the rules and 'force' the smaller market players to play along.

The collective action induced by counteracting outside forces creates an atmosphere of familiarity that, over time, leads to mutual trust and social homogeneity, and so strengthens the coherence of the collusion. Antitrust legislation and the threat of fines, and reputation damage, should make firms cautious. Legal sanctions, given the projected repercussions, should make firms reluctant to collude.

The effect of a limited number of buyers on collusive behaviour can go both ways. A strong buyer may be perceived as a threat and by exercising its bargaining power might promote collusion. On the other hand, the potential sanctions that could be imposed by this strong buyer, following the exposure of collusive conduct, may scare firms into not colluding.

The factors derived from the literature were used for the analysis of documents and in conducting interviews concerning collusion in the Dutch construction industry. The data from the documents and interviews have added to the understanding of the inner workings and management of the collusion as follows:

- The Dutch construction industry as a whole is not a small numbers' market but, in the event of limited tendering procedures, small number markets are effectively created for individual projects. Overlapping geographic as well as client- and product-related cartels operated, in practice creating 'local' small numbers' markets.
- Conspiracy effectively coped with the problem of new entrants by collective action. If an outside contractor was identified, a coordinated, especially low, bid was submitted to ensure a cartel member was successful in winning the contract (i.e. predatory pricing). The pain of this strategy was then spread across all parties in the collusion. Outsiders could only enter the market by tendering below the cost price. It thus became uneconomic to enter the market without becoming part of the collusion process. Another method used to restrict

entry was by controlling the supply of crucial resources. New firms had to pay higher prices for resources (such as asphalt and sand) or the resources were simply not delivered (wrecking the newcomer's performance and reliability). The same strategies would be used if firms tried to bypass the collusion process. The collective behaviour effectively created sanctions and high barriers to entry and exit.

- Auction systems such as tendering and lowest cost selection create a risk for the bidders. Cost estimates are imprecise and uncertain. The more costs a bidder overlooks, the higher the probability that they get the job. This phenomenon is known as the 'winner's curse' (Maks and De Haan, 1997). As a check to see whether a contractor has grossly underestimated the costs of a project, a contractor can seek verification by comparing its figures with the other bids. In this way, contractors can avoid being struck by the winner's curse by timely withdrawing its bid. This urge for verification is shared by the competing companies and brings them together.
- Contractors felt that preparing a bid was laborious and that they should be compensated for the efforts they had to put into the calculation of their bids, especially since such remuneration was common practice until 1992 (Bremer and Kok, 2000). The system to regulate these remunerations was run by a trade association and helped to systemize and formalize the collusion practice.
- System of checks and remunerations had been going on for such a time that the contractors felt it to be accepted common practice. The workings and perceptions of the system seem much as those described by Zardada-Fraser and Skitmore (2000). Only a select number of individuals actually participated in the system, but many felt that these individuals were acting in the interests of their own firms and for the industry as a whole. Although the collusion practice was not played out in the open, it appears that the Dutch colluders felt less negative about their behaviour than their Australian counterparts. Since these practices had been institutionalized, and to an extent endorsed by the government until 1992, the contractors felt hardly any threat of legal sanctions.
- Contractors argued that the collusion system helped to stabilize the workload and reduce their uncertainty about future workload fluctuations.
- There is an obligatory and transparent selection procedure that has to be followed by public sector clients. Consequently, the contractors could straightforwardly predict and manipulate the outcome of the selection procedure.

The Dutch construction industry looks to be an exemplary case of collusion. Based on Figure 1, it can be concluded that the factors acknowledged in the literature and the facts uncovered in the Dutch construction industry are congruent. At the heart of the collusion seems to be the reduction in the risk for the colluders involved. The collusion made their businesses less vulnerable to the winner's curse and predatory pricing, and it also reduced fluctuations in workload. The collusion reduced rivalry and created a more stable and predictable market environment. How could this situation come about and then persist? The cultural dimension might shed light on why Dutch contractors are susceptible to this desire for stability.

Cultural perspective

The persistence, spread and sophistication of this collusion seems to be related to Dutch culture. In 1997, the Advisory Council for Science and Technology Policy (AWT in Dutch) published a report on the influence of regulation on innovation (AWT, 1997). The report characterized Dutch culture as being risk averse (Van Waarden, 1996). Dutch banks are primarily trade and not investment bankers. The insurance industry is widely developed in the Netherlands, as is social security. Efforts to reduce risks and uncertainties are engrained in Dutch culture. Van Waarden also emphasized corporatism as one of the major characteristics of the Dutch system. (See also Figure 2 that characterizes the regulatory styles of the Netherlands, plus France, the US, Germany and the UK.)

Bremer and Kok (2000) took corporatism as the point of departure in their description of the Dutch construction industry. The Dutch construction industry is seen as a highly developed collective sector, with a high level of cooperation between common interest groups. There is a tendency for firms to cooperate, compromise and adopt a consensus, which smoothes the sharper edges of struggle and rivalry. Until the 1990s, the number of lawyers per capita was relatively low (Van Waarden, 1996). Construction conflicts are often solved through compromise because, in a small country, it is acknowledged that the parties involved will meet again in the future. The 'Rhineland style' of governance, as opposed to the 'Anglo-Saxon' style,

reduces uncertainty and the risk of market failure (De Jong, 1997).

The exposed collusion shows an extended and sophisticated level of inner workings and formal organization. The collusion in many ways is an image of the national culture. The combination of corporatism, pragmatism, consensualism and risk aversion fits very well with the formalism of the collusion in the Dutch construction industry.

Legislation

The Netherlands was slow to introduce antitrust regulation (De Jong, 1997). The first Dutch antitrust legislation was passed in 1958 and was quite lenient. It allowed horizontal coordination agreements provided they did not create a situation of abuse or impairment of the public interest. This 'misuse' approach was in breach of European Union legislation that prohibits horizontal agreements (which are only tolerated under special circumstances). This legislation style led De Jong (1997) to characterize the Netherlands as *cartel paradise*.

Although the antitrust laws changed in 1998 and the regulatory style and socio-economic paradigm has shifted since the late 1990s towards the Anglo-Saxon style, collusion in the Dutch construction industry has its roots in the traditional Dutch outlook on business and regulation. Within this culture, a system developed that offered the participants reduced risks and, at the same time, raised the entry and exit barriers. The habitual lenience towards cartels and the one-dimensional predictability of the prevailing public sector procurement practice played into this conspiracy system.

Explaining the persistence

The literature and empirical evidence suggest that most of the factors that promote the emergence and sustainability of collusion systems were present in the Dutch construction industry. The main reasons why the collusion was so manageable were as follows:

- cultural predisposition (especially corporatism, cooperation and pragmatism) towards, and tolerance of, cartels



Figure 2 Regulatory styles (Van Waarden, 1996)

- procurement method of the clients induced one-dimensional competition and shaped a predictable selection process (especially with public sector clients)
- contractors reduced their uncertainty: safeguarding themselves against the *winner's curse*, reducing oscillations in workload and gaining better insights into the strategies and actions of their competitors
- sanctions that could be applied by the colluders proved to be very effective; individual firms could not break out of this system; firms that tried to do so were cut off from new projects or resources and had to rejoin the conspiracy or face bankruptcy
- over time, this became a 'way of life', an uncontested way to do business

These factors all seem to have contributed to the persistence of the Dutch collusion practice in construction industry.

Discussion

The problems exposed in the construction industry raised questions of reform. As a means to reform the construction industry, the Parliamentary Inquiry Committee proposed tougher public sector procurement procedures. Although over recent years new policies for innovative procurement methods—such as design–build, Public–Private Partnerships and performance contracting—had been introduced to reform the Dutch construction industry, the Committee now puts its trust in the cleansing capacity of competition. The promoted procurement strategy is one-dimensional price-oriented competition. Is such trust in a traditional procurement approach and the promotion of competition justified? Will it break down the collusive systems and create a healthy construction industry in the Netherlands? These questions move the discussion into the realm of competition policy, industrial economics and organization theory.

In drafting competition policies, governments have to balance innovation and antitrust policies (AWT, 1997). Two logics have to be combined. On the one hand, competition is seen as the driving force of innovation and industry growth (competition is good). This is the paradigm of antitrust legislation. On the other hand, firms are advised to cooperate and combine means to create a broader base for technology development and adoption (cooperation is good), i.e. the paradigm of supply chains, alliances, clusters and partnerships. Competition policies have to strike a balance between competition and cooperation. There are no easy answers available (AWT, 1997). In the construction sector, this delicate task is further complicated by the fact that government itself is a dominant market player (WRR, 1991).

While the traditional approach to antitrust rules was rather lenient, recent Dutch policies are in favour of competition above cooperation. In line with European Union policy, cartels and bid rigging are seen as reducing competition.

The Parliamentary Inquiry Committee argues that innovation in the construction industry has suffered because of collusions (PEC, 2002). This claim, however, is not supported by investigations or the evidence. It is an assertion rather than a conclusion. The Committee perceives competition in the classical (economic) sense: competition is good and so the more competition the better. This viewpoint underlies much of the competition policy and antitrust regulations around the world (Audretsch *et al.*, 2001; Ahn, 2002).

Audretsch *et al.* (2001) review recent developments in industrial organization theory and relate them to competition policies (they edited a special issue of the *International Journal of Industrial Organization* on this subject). Competition policies and subsequent laws, in the view of Audretsch *et al.*, focus too much on static efficiency. The authors conclude that the dynamics of the competitive process are far more complex than the static structure normally assumes in competition policies and laws. This is also the conclusion put forward in a comprehensive OECD working paper on competition, innovation and productivity growth by Ahn (2002). Both publications conclude that the ethos 'competition is good' thereby make competition policies the predominant concept and main policy focus. The core idea in competition policies, to promote rivalry and avoid monopolies, is based on Bain's (1956) scheme of Structure–Conduct–Performance (Davies and Lyons, 1992; Audretsch *et al.*, 2001). Such policies and laws, however, do not take into account the dynamics within economies and overlook the aim of 'enhancing welfare' in the long run. Audretsch *et al.* refer to the Austrian school led by authors such as Schumpeter (1949), Shackle (1971) and Kirzner (1973). Schumpeter and other economists of the Austrian school argue that competition should be viewed in a longer timeframe, giving firms the opportunity to create new products and processes continuously. In this way, firms can start up new business cycles to gain a competitive advantage (Egidi, 1995). A brief period of relative monopoly is needed to gain the means to fuel this process of renewal. Short-sighted competition, focussed on static efficiency, can hamper the process of business renewal. The recent, more dynamic, approach adopted in the field of industrial organization theory recognizes that in order to exploit new opportunities for profit, critical resources and confidence in the future need to be available (Audretsch *et al.*, 2001). Firms may lack the confidence and means to invest in research and development (R&D). Highly competitive environments might even lead to ruinous competition and to 'a race to the

bottom' (Van Waarden, 1996), leading to problems with quality, safety and compliance with the law.

Tougher public sector procurement policy, as recommended by the Dutch Parliamentary Inquiry Committee, is based on the static efficiency perspective. The focus is on regulating individual transactions. The dynamics of the longer timeframe, and the effects on innovation, technology development and welfare creation, are not explicitly taken into consideration. The object is to create a highly competitive market driven by one-dimensional cost competition. Such an auction-type market may end up suffering from the Bertrand paradox (Maks and De Haan, 1997). That is, in the event of a downturn, prices can be forced down to the level of variable costs (bidders cease to cover fixed costs). Firms in such situations will need to dig deep into their resources (i.e. the race to the bottom). This dynamic then leads to vertical coordination by mergers and take-overs (concentration moving towards an oligopoly) or to horizontal coordination by collusion (Van Waarden, 1996). In either case, survival strategies prohibit firms from investing in innovation and R&D.

Such highly competitive environments typically overlook opportunities to improve an industry's performance and give rise to problems in project control. As contractors put in additional claims to minimize financial losses, they create adversarial relationships and a further breakdown of trust. Reports on this vicious cycle go back four decades (Emmerson, 1962; Bowley, 1966). Innovation in construction remains a point of serious concern (Pries, 1995; Winch, 1998; Gann and Salter, 2000; Manseau and Seaden, 2001). There is still too much short-termism in the sector (Atkin, 1999). To improve the situation in the construction industry requires further non-conventional procurement methods and less selection based on the lowest bid. Latham (1994) and Egan (1998) reinforce this view. Dutch studies and reports have supported this trend (Haselhoff and Rijlaarsdam, 1988; SMO, 1992; ArTB, 1998; AWT, 2000). The construction reform policies adopted around the world stress a move away from adversarial relationships and lowest price selection (NAO, 2001; Strategic Forum for Construction, 2002; Revaluing Construction, 2003). The trend is towards value and quality-driven competition, integrated team delivery, and long-term commitments. Such policies are expected to tackle the construction industry's systemic problems with competition and innovation. Cooperative procurement methods and improved business relationships are expected to create a healthier construction industry, resulting in improved quality, performance and business dynamics.

In the 1990s, more innovative procurement schemes and policies were also adopted in the Netherlands. The Dutch Parliamentary Inquiry Committee picked up on these developments and acknowledged the need

to reform the industry. Therefore, it recommends more innovative integrated procurement, best value contracting and a life cycle perspective. These recommendations, however, seem to be clouded by the ambition to 'restore the proper functioning of the market' by tougher public sector procurement regulation. The Committee asserts that a tougher competitive environment will lead to healthy market dynamics (PEC, 2002). This assertion seems to go against the outlined theory and the international evidence built on the poor performance of the construction industry in terms of R&D, innovation, conduct and profitability. The developing debate in the field of industrial organization suggests that the causality assumed by the Parliamentary Committee is over-simplistic. Collusion is not the root cause of the problems in the construction industry. It would seem to be an effect as well as a cause of imperfect market functioning. Industrial economics suggest that a sector of the construction industry, dominated by highly competitive price-driven public sector procurement, will have a natural tendency to drift towards ruinous competition. This situation is typically conducive to concentration and collusion. If one accepts the outlined market theory perspective, then the proposed strategy to restore market functioning in the Netherlands might well increase the pressure to collude and, as such, backfire. A competitive environment, as desired by the Committee, will certainly put a strain on R&D and innovation in the construction industry.

Conclusions

The present paper has addressed the issue of collusion in the Dutch construction industry. It briefly explained the inner workings of collusion and related the persistence of this collusion to market factors, the underlying Dutch culture and the potential changes in antitrust legislation. It reflected on the proposed strategy to deal with the collusion in practice: to reinstate the proper functioning of the market, and so to produce a healthier construction industry. The assertion that tougher, one-dimensional, cost-driven public sector procurement will achieve this follows from the neo-classical *competition is good* ethos. Recent concepts from the field of industrial organization theory suggest that straightforward *increased competition* might prove counterproductive in the long run.

Academics active in the fields of industrial organization theory and evolutionary economics rarely consider the construction industry. Conversely, researchers, practitioners and policymakers in the construction industry rarely consider these theoretical fields. There is now a great opportunity to bring these theories to the construction industry and the related scientific community. This is especially the case given the numerous initiatives being undertaken around the world to *rethink*, reform and restructure the construction industry. Most

reform initiatives place cooperation above competition, but markets and competition cannot be ignored. They are essential elements in our neo-liberal economies. To create healthy positive industrial dynamics, new balances have to be struck between cooperation and competition (static and dynamic). Crossover from industrial organization theory and evolutionary economics can help in the understanding of the business dynamics of the construction industry, and might provide a better theoretical underpinning for the reform initiatives.

This collusion affair has had a serious impact on the reputation of the construction industry. Investigations by the antitrust authority and department of justice are expected to continue at least until the end of 2003. The contractors fear fines up to 10% of turnover that can be related to the collusion practice. More than 80 people suspected of fraud have been arrested. An influential newspaper published on the Internet the phantom bookkeeping that set this affair in motion. Local authorities consider suing the contractors listed in this document. The local authorities claim that the contracts granted in the past were subject to illegal conduct and therefore have no legal binding. Whether that would oblige the contractors to refund the turnover of these projects is unclear. Also debated is the *blacklisting* of contractors, excluding listed contractors from tendering. Within the public sector agencies and institutes, integrity-policies and procedures are being evaluated and sharpened. The contractors' associations enforce codes of conduct on their members, creating all sorts of tension within these associations. Although a *rethinking construction* initiative has been proposed by the parliamentary inquiry committee (PEC, 2002) as well as by the contractors association (AVBB, 2002), the political climate seems to be steering more towards penitence than to reform.

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