

**DIVERSIFICATION AND CORPORATE GOVERNANCE**  
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# DIVERSIFICATION AND CORPORATE GOVERNANCE

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## Summary

This article addresses the impact of governance structure on diversification behavior. Hypotheses are developed regarding the differences in diversification strategy of cooperatives and stock listed companies. These hypotheses are tested with a sample of 114 Dutch cooperatives and stock listed companies. The analysis shows that stock listed companies are more diversified than cooperatives, related as well as unrelated.

Key words: Governance structure, cooperatives, stock listed companies, diversification  
JEL codes: D2, G3, L2

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## 1 INTRODUCTION

One third of the world food production is governed by cooperatives (Pattison, 2000). This observation raises two questions. First, it is important to know whether or not the governance structure cooperative produces food in an efficient way. Second, it is interesting to know why not all food is produced in agricultural cooperatives.

This article provides an empirical start to addressing the first question by comparing the diversification behavior of agricultural cooperatives and stock listed companies. The coexistence of both governance structures in many industries provides several possibilities for such a comparison. The implications of the choice of governance structure for diversification strategy will be empirically investigated in three sectors (food, trade and financial services) in the Netherlands. Hendrikse (1998) presents evidence and an explanation for the coexistence of cooperatives and stock listed companies in most agricultural and horticultural sectors.

A governance structure specifies on the one hand who formally holds the decisions rights and on the other hand the way in which revenues and costs are (Hansmann, 1996). Governance structures can be distinguished by the identity of the owner of the decision rights. The providers capital, or shareholders, are the owners of the enterprise in a stock listed company. The input providers have the formal authority regarding decisions in a marketing cooperative, of which agricultural – and horticultural cooperatives are prominent examples. Employees have the formal authority regarding decisions in a labor managed firm, whereas buyers have these rights in buying cooperatives.

Product diversification entails the entry of the company into new industries. A company is viewed as diversified when it is active active in more than one industry at the same time (Pitts and Hopkins, 1982). Usually the distinction is made between related and unrelated diversification (Van Oijen, 1997). Related diversification entails the entry of a company into an industry which is related to the current activities of the company in its value chain (Porter, 1985). The similarities are usually in production, marketing of technology. Unrelated diversification, or conglomeration, entails the entry into an industry which has no significant relationship with current activities.

Lins en Servaes (1999) have shown empirically a relationship between the effect of diversification policy on the value of the company and the institutional structure of a country. The institutional structure of a country is measured by the concentration of property rights and the structure of industrial groups. They conclude that ‘evidence supports the notion that differences in corporate governance matter’ (p. 2237). Kamshad (1994) did not find an empirical significant difference between the diversification strategy of stock listed companies and labor managed firms in France. This article compares the diversification policy of marketing cooperatives and stock listed companies in the Netherlands.

The structure of this article is as follows. The next section formulates the hypotheses regarding the difference in diversification behavior of cooperatives and stock listed companies. The next two sections are dedicated to the methodology of our empirical work and the results of the empirical investigation. We close with a summary and conclusion.

## 2 THEORY EN HYPOTHESES

Literature that directly links cooperatives to product diversification is not available. However, clues might be found in existing perspectives on diversification. Five perspectives that explain diversification can be distinguished (Hoskisson and Hitt, 1990; Montgomery, 1994). Each perspective is rooted in a different theory. According to the market power perspective, which is rooted in Industrial Organization, firms diversify because diversification enables them to exert market power through mechanisms like, for example, cross-

subsidization and predatory pricing (Ramanujam and Varadarajan, 1989). The next perspective, which is based on agency theory, argues that firms diversify because their managers have personal motives to do so. Managers do not return free cash flows to the shareholders, but spend them on diversification projects, because of motives such as empire building, pay increases, and reduction of employment risk (Jensen, 1986). The third perspective is based on the strategic contingency theory (Venkatraman, 1989). Product diversification is then seen as a response to contingencies like antitrust law and bad results and uncertainty in the traditional activities of the firm. According to the next perspective, which is rooted in the resource-based view, firms can have excess resources (Penrose, 1959). The resources can be redeployed in new businesses, which implies diversification. Finally, firms diversify to achieve benefits, like economies of scope (Teece, 1982) and those of the internal capital market (Williamson, 1975), which are difficult to realize through market transactions because of high transaction costs.

The five main explanations regarding diversification provide only limited guidance with respect to the relationship between diversification and governance structure. Governance structure could of course be added as an additional contingency to the strategic contingency theory of Venkatraman (1989). This entails however that a theory has to be developed that explains how and why the different governance structures direct diversification strategy. This section provides an attempt at the formulation of such a theory.

The shareholders or the providers of equity can be considered as the owners of the enterprise in a stock listed company. They have the formal decision rights regarding new investments and the inputs which are used. The farmers decide about these issues in a marketing cooperative. This entails usually that each member of a marketing cooperative owns assets in, and therefore decides about, two stages of the production chain. The farmer decides individually about the investments at his farm and owns the farm assets. On top that do all farmers collectively own the assets in the next stage of the production chain, which are dedicated to processing the harvest or produce of the farm. An agricultural or horticultural cooperative boils therefore down to forward integration of many farmers collectively in the processing stage of the production chain.

The difference between the governance structures stock listed company and marketing cooperative is noticeable in many aspects of these organizations (Hendrikse and Bijman, 2002 and Hendrikse and Veerman, 1997, 2001a and 2001b). The members of a marketing cooperative are collectively the owner, take care of the financing of the cooperative, decide democratically and buy inputs from the members. The shareholders of a stock listed company are individual owners, they have provided the external equity, the decision making is autocratic and inputs are bought from the best provider of inputs.

A number of aspects of democratic decision making will be addressed briefly, which is based on Hendrikse en Veerman (2001a). Democratic decision making usually entails that it is tried to establish consensus in order foster optimal involvement of the members. This has advantages as well as disadvantages. It is attractive that different perspectives and experiences can be combined in the decision making process and makes it less sensitive to political activities, because bad proposals won't survive. An important disadvantage is the time consuming process of decision making and forming consensus regarding important policy shifts, especially when the relationship with the input activities of the marketing, and therefore with the core activities of the members, is hard to make.

The democratic decision making structure in marketing cooperatives is not only time consuming, but can also result in a tendency to avoid new initiatives. The reason is that new initiatives do not have the same consequences for all members. The lack of homogeneity between the members may prevent that unanimity between the members will not be reached. New initiatives may also be frustrated by the way a marketing cooperative is financed. Takeovers cannot be financed by external equity. Equity has to be generated internally. This has its own problems due to the finite duration of membership. Earnings during the membership have

to be at least as high as earnings elsewhere. This implies that the internal 'rate of return' on the assets of a cooperative have to be at least as high as in a stock-listed company when the average duration of the membership is shorter than the pay back period of the project creates problems. This is the well known horizon problem (Bonin, Jones en Putterman, 1993). The increasing average age of the members in marketing cooperatives exacerbates this problem. Marketing cooperatives which are mainly financed internally will therefore underinvest compared to stock-listed companies when the claims of individual members are not transferable. This effect will be enhanced by the terms on which financial funds will be made available by third parties. The property of member domination in a marketing cooperative entails that the decision rights of external equity providers has to be bought. This is not done in a stock-listed company. The assignment of decision rights regarding investment projects to shareholders gives shareholders the confidence that their financial means will be spend well.

These differences between these the governance structures marketing cooperative and stock-listed company indicate that marketing cooperatives will invest less than stock-listed companies, related as well as unrelated. These conclusions are formulated in the next two hypotheses:

*Hypothesis 1: Stock listed companies are more diversified in related activities than marketing cooperatives.*

*Hypothesis 2: Stock-listed companies are more diversified in unrelated activities than marketing cooperatives.*

Consensus decision making in marketing cooperatives will be easier when the members are more homogeneous. Marketing cooperatives which are focussing on one activity, like milk, have homogeneous members. Diversification can undermine this homogeneity. A marketing cooperative which starts to sell vegetables in cans next to its dairy products has two different types of suppliers. The fair allocation of the revenues may be difficult. The relatedness between certain activities may make it desirable to bundle certain functions. For example, marketing and logistics can be combined to a certain extend in order to save costs. A simple allocation rule for the division of revenues, like the number of delivered liters of a certain quality, cannot be used anymore. Difficult negotiations between the different types of members will be the result. The addition of an unrelated activity, like the sale of insurance products, diminishes this problem. There will be less combined functions. Each activity has its own revenues, which can be relatively easy be divided across the different types of members.

Related diversification causes less problems in stock-listed companies. The shareholders are homogeneous, in the sense that that they provide the same type of means. Profits can be shared according to the funds that have been provided. Another feature is that shareholders can diversify their risk easy by keeping a portfolio of stocks. The wealth of a member of a marketing cooperative is determined to a large extend by the well being of the marketing cooperative. They benefit therefore from a marketing cooperative investing in activities whose returns hardly correlate, which entails spreading of risks. Unrelated diversification establishes this. The expectation is therefore that, in comparison to a stock listed company, a marketing cooperative diversifies relatively more in unrelated than related activities. This is summarized in our third hypothesis.

*Hypothesis 3: Marketing cooperatives diversify relatively more in unrelated than related diversification than stock listed companies.*

## 3 METHODS

### 3.1 Data

The data were obtained from REACH (*REview and Analysis of Companies in Holland*). REACH is an electronic data source, which contains information of many Dutch companies. The information is predominantly financial. Important for our study is that the legal structure, the industry codes, and a brief description of the activities of each company are also provided.<sup>1</sup>

All cooperatives that were recorded in the 1996 edition of REACH were included in the sample. For each cooperative, we established the industry code of the main activity. This was based on the industry codes and the description of the activities of the cooperative included in REACH. Subsequently, we selected a matching corporation with the same main activity. This approach allowed us to control for industry effects. If more corporations were available, we selected one corporation randomly.

The resulting sample contains 114 companies, of which 57 are cooperatives and 57 are corporations. The companies can be assigned to three sectors or broad categories of activities: agricultural and food (58 companies), financial services (34 companies), and wholesale and retail (16 companies). Besides, there is a small category of companies with other activities (6 companies).

### 3.2 Measures

#### 3.2.1 Diversification strategy

To measure diversification strategy we used Wood's (1971) product-count measures. These unweighted measures are less refined than, for example, the entropy measures (Jacquemin and Berry, 1979). However, they are easy to calculate and have lower information requirements (Lubatkin, Merchant, and Srinivasin, 1993). Specifically, they do not require a breakdown of a firm's total sales by activity codes. This kind of breakdown would not have been feasible in our study, because most of the companies in our sample do not disclose the necessary information. Moreover, Lubatkin et al. (1993) find a high degree of correspondence between Wood's product-count measures and Rumelt's (1974) categorical measure, which supports the validity of the product-count measures.

Wood (1971) distinguishes broad spectrum diversification (BSD) and narrow spectrum diversification (NSD). BSD is expansion, other than vertical integration, into an industry with different first two digits of the industry code. NSD is expansion, other than vertical integration, into an industry with a different four-digit industry code, but the same first two digits. BSD can be viewed as unrelated diversification, whereas NSD represents related diversification (Varadarajan and Ramanujam, 1987). We calculated both BSD and NSD, using the industry codes of each company according to REACH. To improve the distributional characteristics, we used the log of BSD and NSD in the analysis, thus obtaining the variables LOGBSD and LOGNSD.

In order to test our third hypothesis, we needed a variable that expresses the relation between related and unrelated diversification. We used a variant of MNSD, which was introduced by Varadarajan and Ramanujam (1987). MNSD, which stands for mean narrow spectrum diversification, is calculated as the number of four-digit industry codes divided by the number of two-digit industry codes of a company. In order to convey the relation between related and unrelated diversification, we replaced the numerator by NSD (our measure of

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<sup>1</sup> The industry codes are based on the BIK system. BIK, which stands for *BedrijfsIndeling Kamers van Koophandel* (Company Classification Chambers of Commerce), is the Dutch equivalent of the American SIC.

related diversification). Again, we took the log of the outcome to get a better approximation of the normal distribution. The resulting variable is labeled LOGMNSD.

### 3.2.2 Legal structure

For a company's governance structure or legal structure we used the dichotomous variable LEGALS. LEGALS has a value of 0 for cooperatives, and a value of 1 for corporations.

### 3.2.3 Size

Controlling for size is quite common in diversification studies (Chatterjee and Wernerfelt, 1991). A positive correlation can be expected between size and diversification. Also, corporations may generally be larger than cooperatives. As indicated earlier, corporations face fewer restrictions with respect to the funding of expansion. They can finance expansion through the public offering of new shares in the stock market, whereas cooperatives are restricted to obtaining new equity from their members. If we would not control for size, then differences between the diversification strategies of corporations and cooperatives could be associated with size differences, instead of legal structure.

Usually, the total sales of a firm are taken as a proxy of size (Nayyar, 1993). We also choose total company sales. To obtain a more normal distribution, we used LOGSALES, the log of sales.

### 3.2.4 Statistical analysis

We used analysis of covariance (ANCOVA) to test the hypotheses. Three analyses were performed, one with LOGBSD as the dependent variable, one with LOGNSD as the dependent variable, and one with LOGMNSD as the dependent variable. In all three cases, the factor was LEGALS, and the covariate was LOGSALES. The inclusion of LOGSALES as a covariate is equivalent to testing whether the mean differences in diversification strategy are associated with the legal structure after adjusting for differences in size.

## 4 RESULTS

Hypothesis 1 predicted that cooperatives would have less related diversification than corporations. Hypothesis 2 predicted the same, but then for unrelated diversification. According to hypothesis 3, the ratio of related to unrelated diversification is lower for cooperatives than it is for corporations.

Table 1 shows the results obtained when all three hypotheses are tested by comparing cooperatives to corporations, while controlling for size. We excluded one corporation from the analyses, because it proved to be an outlier with respect to both size and diversification strategy. Table 1 also provides some descriptive statistics. It should be noted that the group means and standard deviations (in parentheses) are not based on the transformed variables LOGBSD, LOGNSD, and LOGMNSD, but on the original variables, since these are easier to interpret.



	LOGBSD		LOGNSD		LOGMNSD	
	F	<i>p</i>	F	<i>P</i>	F	<i>p</i>
Factor for legal structure: LEGALS	19.08	0.00	8.90	0.00	0.04	0.84
Covariate for size: LOGSALES	0.08	0.77	13.81	0.00	9.06	0.00
Group mean (standard deviation)						
Cooperatives (N = 57)	1.28 (0.53)		1.81 (1.33)		1.44 (0.88)	
Corporations (N = 56)	1.91 (0.98)		2.79 (1.90)		1.87 (1.67)	

**Table 1. ANCOVA results**

The results indicate that size (LOGSALES) has a significant (positive) effect on related diversification (LOGNSD) and on the relation between related and unrelated diversification (LOGMNSD), but not on unrelated diversification (LOGBSD). The effect of the legal structure (LEGALS) is highly significant, on both related and unrelated diversification. The means show that, on average, corporations are active in 1.49 times as many unrelated industries as cooperatives are. The difference is slightly larger for related diversification. Corporations work in 1.54 times as many related industries as cooperatives do. Therefore, corporations turn out to be more diversified, both related and unrelated, than cooperatives. This supports our first two hypotheses.

We can add that the results are stable in all sectors. That is, in agricultural and food, financial services, wholesale and retail, and other activities, corporations are, on average, more diversified than cooperatives, both in a related and in an unrelated sense.

The means seem to support our third hypothesis. Cooperatives have a lower ratio of related to unrelated diversification than corporations. However, the difference is not statistically significant. This pattern repeats itself in three out of four sectors. In financial services, the ratio is almost similar.

## 5 CONCLUSIONS AND FURTHER RESEARCH

This article has empirically investigated the relationship between governance structure and diversification. Hypotheses are developed regarding the difference in diversification behavior between marketing cooperatives and stock listed companies. Testing of these hypotheses was done with a cross section study of 114 Dutch cooperatives and stock listed companies. The results indicate that stock listed companies are more diversified than marketing cooperatives, related as well as unrelated. These results hold for each sector that we have investigated.

Our results indicate that the incorporation of the variable governance structure in diversification research seems to be a fruitful direction for further research. A few lines of research come up immediately. First, the relationship between related and unrelated diversification in each governance structure is not clear. The impression is that marketing cooperatives diversify more in unrelated than related activities than stock listed companies. However, this difference could not be shown in a statistically significant way with the current sample.

Second, the above results do not necessarily imply that marketing cooperatives are less efficient/profitable than stock listed companies. We established that there is a significant difference between the diversification behavior of marketing cooperatives and stock listed

companies, but the relationship with efficiency is less clear. The meta-study of Palich, Cardinal en Miller (2000) reports an inverse U relationship between diversification and profitability. The 'horizon problem' may imply that marketing cooperatives will use a higher return on investment for new activities / projects than stock listed companies. The diversification strategy of the marketing cooperative would therefore be more in the middle of the inverse U relationship than the stock listed company. However, the 'horizon problem' may also result in not adopting certain attractive activities because it will take a long time before these projects generate money. Besides, the marketing cooperative may also adopt projects which are less efficient, because the members take also farm considerations into account. The impression is that these latter effects dominate. The data to test these hypotheses is not available.

A third direction for further research is that the implicit assumption in the specification of the regression equations that the governance structure is the exogenous variable and the diversification strategy the endogenous variable. This is in line with the incomplete contracting theory and transaction costs economics, where the choice of governance structure precedes the choice of investment projects. However, diversification policy may be determinative for the choice of governance structure. This would be in line with the result 'Form follows function' in evolutionary biology (Cosmides en Tooby, 1994) and the claim of Chandler (1962) 'structure follows strategy', although the latter claim has been formulated more with respect to the internal structure regarding divisions and functional departments than with respect to governance structure.

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