A matter of scale – The accomplishment of scale advantages by Dutch housing corporations

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Abstract

Like many other semi-public organizations in the Netherlands, housing corporations are involved in a steady process of up-scaling. The growing size of housing corporations is considered by New Public Management scholars and many practitioners favorable for the effectiveness, efficiency and strategic position of these organizations. This paper presents empirical research data showing that the process of up-scaling does not lead to positive results. Large-scale housing corporations do not function more effectively or more efficiently than smaller corporations, although their strategic position is stronger than that of the smaller ones. However, this strategic advantage has little to no effect on the corporations' primary task to provide affordable housing for lower income groups. It is above all beneficial to the personal interests of the members of managing boards.

1 Introduction

About two decades ago, inspired by New Public Management rhetoric, the Dutch government started to promote the merger of semi public organizations in education, health care and welfare services amongst others. These are sectors in which non profit organizations deliver public services wholly or partially financed by the state. The up-scaling of organizational activities was seen as a means to gain efficiency and effectiveness and to strengthen the strategic position of organizations. Recently, as a result of a number of scandals concerning mismanagement and possible fraud in

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educational and health care institutes and housing corporations, in politics the conviction has gained ground that organizations in the Dutch semi-public sector have grown too big. Allegedly, the mergers have resulted in empires in which almighty managers, hardly corrected by supervisory boards, seek prestige, power and personal gain, and disregard the interests of other stakeholders.[2]

The optimistic views of New Public Management scholars and many Dutch practitioners with respect to the beneficial effects of the up-scaling of semi-public organizations on the efficiency, effectiveness and strategic position of these organizations reflect classic theories in the field of business administration (Trautwein, 1990). The main argument, which goes back to Adam Smith, states that large organizations have access to indivisible equipment not available for small organizations. Furthermore, large scale production would make labour specialization possible and would increase the scope of shared services, both resulting in higher quality production and lower operational and managerial costs. The up-scaling of semi-public organizations would therefore be favourable for the *efficiency* and *effectiveness* of these organizations (Mansfield, 1976, pp. 128-129). The argument about the positive relation between the scale of operation of a semi-public organization and its *strategic position* stems from theoretical approaches that focus on the industry environment of a firm. Large scale firms are supposed to have more bargaining power in relation to suppliers and buyers. They would also have more resources at their disposal to fight competitors or to prevent new firms from entering the industry (Porter, 1985).

Although the aforementioned assumptions about the relation between the size of an organization and its efficiency, effectiveness and strategic position are endorsed by many theorists and practitioners, they have also been widely criticised in the literature, both on empirical and theoretical grounds. As for the *efficiency* and *effectiveness*, according to some literature large organizations may find that diseconomies set in because of the limits of span of control and the complexity of coordination and management (Allan, 2003).With respect to non-profit organizations

[2] Exemplary is the phrase coined by Herman Wijffels, former CEO of the Dutch Rabobank, former chairman of the Dutch Social Economic Council and of a number of Dutch governmental advisory committees: "The Netherlands suffer from "large scale-itis" (BNR news radio, November 6th 2012).

entrusted with the delivery of public services there is a special problem in assessing the effect of up-scaling. As a general rule, the performance of these organizations is not measured in financial returns, but in terms of the realization of social values, of services valued differently by different stakeholders involved (clients, professionals, donors). This makes performance measurement extremely complex (Moss Kanter & Summers, 1987). As for the *strategic position* of an organization, there is little reason to dispute that big organizations find themselves to be stronger in relations with clients, buyers and competitors than small ones. One can however question the relevance of a strong strategic position for organizations for which market shares and profitability are not, or should not be, primary goals. All in all, long before New Public Management became a governance paradigm, there was sufficient reason to doubt the basic assumptions of classic business administration about the beneficial effects of the up-scaling of semi-public organizations. However, in politics and practice people prefer to rely on simple, taken for granted assumptions. These assumptions are traded in for others, if the tide turns.

The recent turn in the public appreciation of the large scale of semi-public organizations reflects another cluster of theories of business administration. These are theories which claim that management decisions with respect to investments and mergers are not undertaken to improve the efficiency and effectiveness of the organization or to strengthen its strategic position, but to serve the *personal interests of managers*. For example, Scharstein and Stein (1990) analyse herd behaviour. Such behaviour implies that managers simply mimic the investment decisions of other managers, ignoring information about the efficiency and effectiveness of the investments, because they believe that it will enhance their reputation and improve their position on the labour market. Shleifer and Vishny (1989) show that managers decide for excessive investments in assets which are complementary to their specific skills. Such investments make managers valuable to shareholders, enable managers to raise their own compensation and make it difficult for shareholders to replace them. The authors term this phenomenon managerial entrenchment. More in general, managers can be seen as "agents" who have an incentive to act in a way which does not maximize the welfare of the "principle", regardless of whether the latter are shareholders of a private firm or governments which engage non-profit organizations to fulfil social functions (Berle & Means, 1933; Jensen & Meckling, 1976; Shleifer &

Vishny, 1989). In the same vein, empire building theories of mergers attribute the consolidation of firms to managers striving for the maximization of growth as a means to gain personal power, prestige and benefits (Williamson, 1964; Mueller, 1969; Rhoades, 1983).

Looking at the mergers in the semi-public sector in the Netherlands, different mechanisms or rationalities are possibly at issue. On the one hand, merger decisions may be the result of conscious attempts to improve efficiency and quality through operational synergies or the strengthening of the organization's strategic position vis-à-vis suppliers, consumers or competitors. One the other hand, merger decisions may be the outcome of managerial behaviour which is primarily motivated by the personal interests of managers.

In the Dutch housing sector, the up-scaling of housing corporations, which are private non-profit organizations entrusted with the public task to provide affordable housing for lower income groups, has been a steady process over the last decades. It has been a process where housing corporations themselves have taken the initiative, but every merger had to be and actually was endorsed by the ministry responsible for housing. The number of housing corporations has decreased from 855 in 1985 to 389 in 2011. In this period, the average number of housing units per corporation rose from 2290 to 6206; at present, the biggest corporations own more than 90.000 units (CFV, 2012).

In view of the actual debate about the scale of operation of semi public organizations in the Netherlands, the question arises what the actual effects of the up-scaling process in the sector of housing corporations are. *Does the on-going process of up-scaling result in more efficiency, more effectiveness and/or better strategic positions for housing corporations or is this process primarily beneficial to empire building aspirations of their managing boards?* This question is answered in this paper.

First, we explain the data used for answering the central question of this paper and clarify the ways in which these data have been analyzed (section 2). Then, we assess the actual economies of scale (i.e. the efficiency and effectiveness) in the sector of Dutch housing corporations. Recent research suggests that the sector shows diseconomies of scale, establishing a negative correlation between scale and average

operational costs. However, the matter needs a more refined approach, because there are a number of possible explanations for the relatively high operational costs of large corporations, which do not relate to the scale itself, such as a high level of activities caused by the composition of the housing stock or the tenant population (Bortel, Mullins, & Gruis, 2010) (section 3). Next, we examine the possible relation between the scale of housing corporations and their strategic position, an issue that so far has not been the subject of research. The strategic position of a housing corporation is conceived as its position in relation to competitors, i.e. other housing corporations and project developers, to business counterparts such as municipalities, and to the main public "principle", i.e. national government. We determine whether larger corporations have acquired a stronger position in relation to these actors than smaller corporations. Subsequently, we investigate whether the possible strategic advantages of large-sized housing corporations are beneficial for these organisations themselves or whether they are primarily favourable for their managers (section 4).The paper ends by drawing some conclusions in the light of the central research question and by placing the conclusions in a broader context (section 5).

2   Data set and research methods

Empirical evidence comes from a data set (2002) provided by two Dutch regulatory agencies and supplemented with demographic and market information. On most items the data set covers the whole population of housing corporations (N = 552). However, exclusion of outliers reduces the number of observations in the analyses. Testing is made by multiple regression. The sets of independent variables are controlled for collinearity. The dependent variable for scale has been converted into logarithmic scales[3] in order to attain approximately normal distribution of observations. The significance level is set at either 1% (marked with **) or 5% (*). Data on some variables stem from a sub-sample, based on text analysis of a quarter of the annual reports (n = 144) (Koolma H. M., 2008).

Additional data from other sources have a more recent reference year: data on the participation of housing corporations' managers in committees of the sector for the annual report of the sector organization over 2004 and data on the frequency of speeches of these

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[3] The conversion of the variable Size into the variable LN Size takes place in the following way: 600 becomes 6,40; 1800 becomes 7,50; 4000 becomes 8,29; 8000 becomes 8,99; and 25000 becomes 10,13.

managers in the programs of national symposia in 2005. These two variables are combined to the variable 'prominence on the institutional field', assuming a causal relation between scale in 2002 and the events in 2004 and 2005.

3 Scale, efficiency and effectiveness

First, we will address the issue of economy of scale in an order of sub questions, each of one operationalized into a hypothesis and tested by means of linear regression analysis.

3.1 Straightforward relation between scale and costs

The first sub question is how costs are related to scale. The question is presented as the following conceptual model.

Figure 1 Straightforward (dis)economy of scale

In international literature on scale effects of municipalities is warned for such a simple approach of efficiency (Holzner, 2009). However, a previous research of the costs of Dutch housing corporations indicated a positive correlation between scale and costs, which was persistent while correcting for several other variables (Schellevis & Weyden, 1987). Inasmuch 15 years are gone by, a new observation is made.

Formulated as hypothesis (H1a), the expectation is that the higher the scale of operation the higher the level of costs will be. This correlation is persistent when it is corrected for workload (H1b).

Scale of operation is measured by the number of houses managed by the corporations. This criterion is common in the sector, and more suited to the business than sales volumes and less susceptible to window dressing than balance sheet totals. There are two items for costs, the costs of personnel (including social contributions) and the aggregate business costs, excluding building maintenance and capital costs. The costs variables will be expressed in ratios to the number of houses. The workload is

operationalized by the variable tenants turnover, that is, one tenant cancels his or her contract, moves out and is replaced by a new tenant. This activity is a good indicator for the common workload of a public housing provider. The variable is calculated through a division of the number of tenants' turnovers in an annual report year by the number of houses managed by the corporation.

The first test is on the aggregate organization costs. Linear regression gives a confirmation with a R-square value of 0.221 (p = 0.000** and n = 544). A trial with an exponential curve scores also 0.221. The costs of personnel is also significantly and linear correlated to scale (R-square = 0.181, p = 0.000 and n = 480). A trial with an exponential function gives also a 0.181 score for a curve that approximates a straight line. Both tests indicate that the higher the scale of operation the higher the level of costs will be (H1a accepted).

The second step in the analysis is to question what happens if the correlation between scale and operational costs is controlled for the workload, represented by the variable tenants' turnover.

Table 1 Linear regression on aggregated costs of operation

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	174,500	58,518		2,982	,003
	Size LN	91,130	7,659	,465	11,899	,000
	tenant turnover rate	854,659	359,210	,093	2,379	,018

dependant variable aggregated operational costs

R square = 0.244 p = 0.000** and N = 531

The tenant turnover rate has a weak but significant correlation (Beta = 0,093 p = 0,018*) to the costs of operation. In comparison to the bivariate regression the β value is decreased from 0.470 to 0.465. So the straightforward positive relation between scale and costs still stand after correction (H1b accepted).

3.2 Two opposing scale effects

In international-comparative literature (Fox & Gurley, 2006) on sub-national governments the assumption is supported that there are two opposing scale effects.

Small scale is in favour of activities which concern contacts with clients. On the other hand, large scale provided advantages at capital-intensive activities like financing and investment. There findings are presented as the following model.

Figure 2 Two opposing effects of scale (conceptual model)
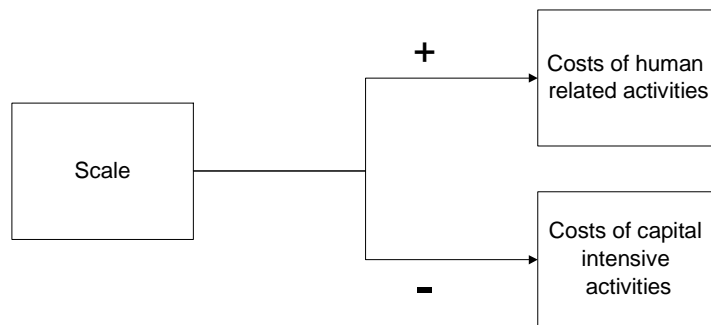
The first hypothesis is that the smaller the scale the more economical the operation will be at human inter-relational activities (H2a). The opposing effect is represented by the hypothesis that the higher the scale the lower the costs will be for investments and financing (H2b).

The operationalization of the human inter-relational activities has the following argumentation. Housing corporations are on base of law obliged to provide houses to people with a low profile in market and socio-economic respect. The execution of this public task requires intensive communication, screening and exertion of social control to the candidates and tenants. Low debt rates indicate a good fit between tenants paying capacity and the price of the houses. High debt rates lead usually to loss of revenues, so housing corporations which control their tenants' debts will have lower losses. Thus, the rate of tenants' debt is a criterion of both effectiveness and efficiency. Capital-intensive activities entail two items, namely the costs of building maintenance and the interest paid to the banks. The costs of building maintenance have the number of managed houses as denominator. Costs of capital are expressed as the average rate of interest on the loans. Both variables are measured for each housing corporation in one annual report year (capital costs), or averaged from two report years (building management) in order to decrease the effect fluctuations from year to year in this accounting item.

As argued heretofore, the rate of tenants' debt on the balance sheet is a good proxy for testing the relation between scale and the costs of human inter-relational activity. A

linear regression shows a positive correlation between LN Size and LN Rate of tenants' debt (R-square = 0.124, p = 0.000** and n = 522). The correlation does have to be corrected, because, for instance, the share of low-income groups has no significant effect (p = 0,255). The results show that the larger the housing corporation, the higher is the rate of tenants' debt. At this item of human inter-relational activity the correlation does support the presumption that smaller organizations perform better at human inter-relational activities (H2a accepted).

Do large housing corporations perform better at capital intensive activities? A first operationalization concerns the costs of building maintenance, as they have more capacity to plan and realize maintenance projects. An initial test show a weak correlation (R-square = 0.014 p = 0.006**), however the coefficient is positive, what implies that the larger the corporation the higher the maintenance costs per house. As this observation is contrary to the prediction, some control variables are tested. Technical experience tells that maintenance costs depend on size and age of the building. The housing stock of housing corporations probably varies in average size and age. The additional analysis has the following results.

Table 2 Linear regression on maintenance costs

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	665,966	141,777		4,697	,000
	SizeLN	32,980	17,410	,087	1,894	,059
	Age of building stock	11,962	2,508	,219	4,769	,000
	Average size houses	,612	,645	,043	,950	,343

dependant variable 2 years average maintenance costs per house

R square = 0.066 p = 0.000** and N = 468

Size has still a positive relation to maintenance costs, but now the significance is insufficient (p = 0,059). So, on the subject of maintenance costs there is no indication of a scale advantage at capital intensive activities. The first test for the hypothesis is rejected.

A second operationalization of capital intensive activities regards the average interest rate paid to the banks for long-term loans. Presumed is that large corporations transact larger dealing volumes on the capital market and attain therefore lower interest rates.

A first analysis show no significant scale effect on average interest rate levels (R-square = 0.001 p = 0.441). Also in this case a control variable is added, namely the average period till contract end or revision. Short loans are often cheaper, so it might be that the observation is disturbed by varying contract periods. The additional analysis results in a slightly higher correlation.

Table 3 Linear regression on average capital costs

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	,063	,002		37,731	,000
	SizeLN	,000	,000	,025	,545	,586
	Contract period	,000	,000	-,118	-2,531	,012

dependant variable average interest rate on long-term loans

R-square = 0.015 p = 0.03* and N = 463

However, in this estimation model, the size has even less a significant effect (p = 0.586).

The conclusion is that small sized housing corporations perform better at human inter-relational activities (H2a accepted). That is in line with the predictions from literature. However, the costs of capital intensive operations do not depend on scale (H2b rejected). The predicted economy of scale in capital-intensive activities is not found.

3.3 Do large housing corporations perform more activities?

As so far no evidence has been found for economic advantages of scale. However it is too easy to conclude that it is uneconomic, inasmuch the analyses have been restricted to cost-efficiency. The assessment of economic effects of scale has to be extended to the effectiveness. It might be that large corporations, although having higher cost, do more. Formulated as hypothesis, the larger the housing corporation the higher the level of activity will be (H3).
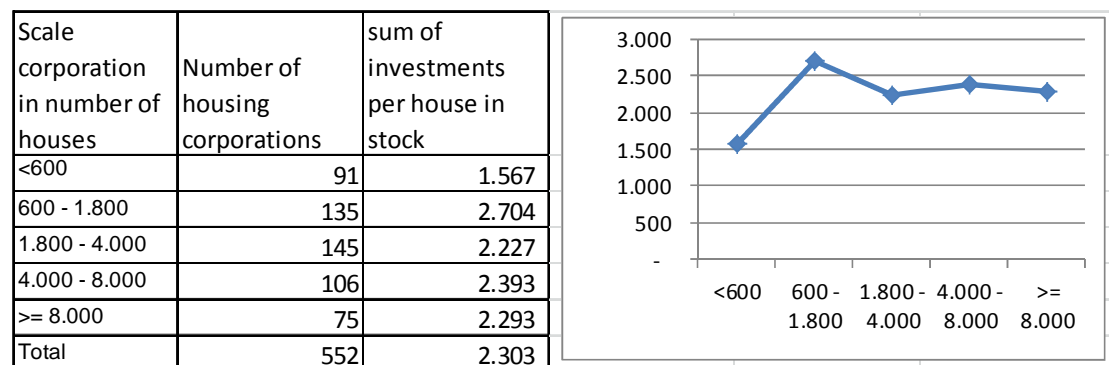
Figure 3 Scale explaining level of activities (conceptual model)

The level of activities is operationalized as the sum of all investments divided by the number of houses managed. This division is made in order to measure the investment level relatively to scale. Doing so, it possible to assertain whether for instance two housing corporations with 4.000 houses invest more or less then a housing corporation with 8.000 houses in stock.

Analysis shows that there is no significant correlation (R-square = 0,01 p = 0,554 n = 548). This result is contrary to the expectation, so some descriptive statistics is applied to have a closer look.

Table 4 and Figure 4 Sum of investments per house in stock

| Scale corporation in number of houses	Number of housing corporations	sum of investments per house in stock
<600	91	1.567
600 - 1.800	135	2.704
1.800 - 4.000	145	2.227
4.000 - 8.000	106	2.393
>= 8.000	75	2.293
Total	552	2.303

Notable is that very small housing corporations (<600 houses) invest less than the mean (€ 2.303 per unit in stock). In the other classes there is no apparant relation between scale and sum of investments. Even yet, housing corporation in the class 4.000 – 8.000 houses invest relatively more than housing corporations with moren than 8.000 houses in stock.

A second operationalisation is made, following the supposition that a certain scale is required for urban regeneration projects (Bortel, Mullins, & Gruis, 2010). Housing corporations account for the number of houses that will be involved in projects of urban reconstruction. This account is also weighed for the number of houses in stock. Analysis shows a weak but significant correlation (R-square = 0,038 p = 0,000 n = 552). Other Dutch authors observe that the relation between scale and level of activity is influenced by the fact that a part of the small housing corporations show no activity (Buitelaar, Broek, & Segeren, 2009). If this group is excluded, the correlation

between scale and the share of houses in urban regeneration is no longer significant (R-square = 0,009, n = 266 p = 0,124). It is obvious to suppose that the grade of urbanisation of the working area might correlate to the share of houses assigned for urban regeneration. This variable is added in the conceptual model.

Figure 5 Scale and grade of urbanization explaining urban regeneration (conceptual model)
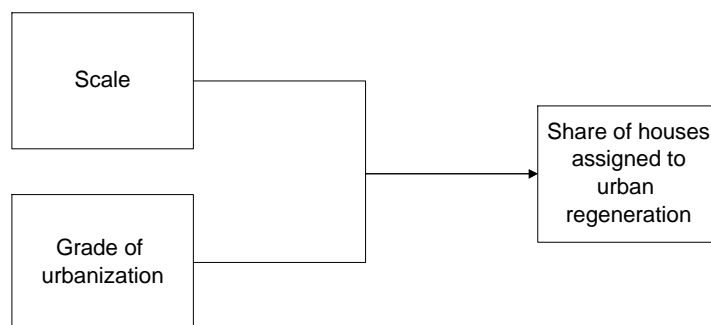
The regression analysis of the model has the following results.

Table 5 Linear regression of scale and urbanization explaining urban regeneration

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	5,888	,299		19,703	,000
	Size LN	,011	,004	,111	2,474	,014
	Grade of urbanization of working area (descending)	-,022	,005	-,208	-4,639	,000

dependant variable share of housing stock assigned for urban regeneration

R-square = 0.073 p = 0.000** and n = 545

Compared to the model with scale (LN Size) as single independant variable the Beta value decreases from the 0,194 to 0,11 while the significance exceeds the 0,01 threshold. The grade of the urbanizationis stronger a explanator then the scale of operation. As so far measured, there is only weak evidence to accept the H3 hypothesis.

Heretofore an indication is found that small housing corporation fail to perform some activities. In next table more evidence is given for this indication.

Table 6 Share of corporations with activity rate > 0 measured per type of activity

Activities	Size (numb. of houses)				
	0 - 599	600 - 1799	1800 - 3999	4000 - 7999	>= 8.000
Investments volumes	87%	100%	99%	100%	100%
Building program rental houses	34%	83%	90%	97%	93%
Building program houses for sale	8%	40%	53%	70%	82%
Acquisition and refurbishing houses of other property owners	4%	16%	22%	33%	45%
Sale of existing rental houses	24%	51%	78%	84%	96%
Loss of houses by demolition and joining	13%	43%	63%	71%	76%

The last four activities do not belong to the regulatory or statutory objectives of housing corporations. However, the Dutch government promotes and facilitates those activities, so it is a matter of corporation policy and discretion to perform or not to perform the additional activities. Especially the lowest size class presents a low share of full activity performance. That is to say, the chance that an activity is carried out is substantially lower than in the other scale classes. A probable explanation is that these very organizations lack specialists and managerial power to perform certain operations. The hypothesis H3 is reformulated to H3b, reading that the smaller the housing corporation the higher will be the chance that they refrain from additional activities. This hypothesis is accepted.

## 4. Strategic advantages of large scale operation

The next step in our analysis is to investigate whether large scale corporations enjoy strategic advantages over small scale corporations. While there are no systematic data available about how executives of housing corporations perceive the possible advantages of mergers in terms of efficiency and effectiveness, there are some data available with respect to strategic motives for mergers. Although the samples are relatively small and conclusions can only be drawn with some reservation, top score motives for mergers as they result from three different surveys are: large scale will provide a better market position (Veghel, 1999); increasing size will help to become a stronger player in the (local) housing market (Cebeon, 2006); and large scale will provide for a better position in real estate development (Koolma, 2008, p. 512).

The first two observations are not specific about the market on which the position would improve. Housing corporations are on the one hand demanders on the markets for land, building capacity and capital; and on the other hand they are suppliers of houses. Here we will assume that scale-considering strategies aim at building opportunities. Therefore, the first question addressed is whether large size provides better building opportunities in relation to competitors. Subsequently, we will raise the matter of the relation between scale and personal advantages for the executives of housing corporations.

4.1 Strategic scale advantages to housing corporations

In this paragraph we analyze whether large scale operations provide housing corporations with better building opportunities than small scale operations. Municipalities have a say in real estate projects in their working area, so the power balance between housing corporation and municipality have to be taken into account. Two options are thinkable: the housing corporation is dominant because of a major share in the municipal housing stock, or the housing corporation has due to a large-spread working area the possibility to select and to arrange with the most attractive, less constraining municipality. The following model reflects this positions.

Figure 6 Scale and position regarding municipalities explaining building opportunities (conceptual model)
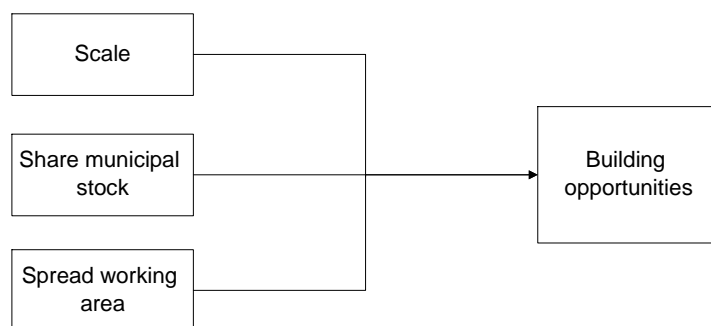
This model will be tested with four depending variable, all rated to the present number of rental houses: forecasted program for building of rental houses (H4a); realized program for building of rental houses (H4b); forecasted program for building of houses for sale (H4c); and realized program for building of houses for sale (H4d).

Table 7 Linear regression on forecasted opportunities to building of rental houses

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	,065	,034		1,923	,055
	SizeLN	,000	,005	,002	,037	,970
	Share of social housing within municipal boundaries	-,017	,019	-,043	-,917	,359
	Spread of working area	,010	,005	,098	1,958	,051

dependant variable forecasted building program rental houses for sale rated to rental housing stock

R-square = 0.013 p = 0.088 and n = 510

The model as a whole is not significant ($p > 0.05$) . Therefore, no evidence is found that large scale provides larger forecast to building rental houses (H4a rejected). The same conclusion can be drawn as the realized rental program is analyzed.

Table 8 Linear regression on realized opportunities to building of rental houses

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	,016	,004		3,719	,000
	SizeLN	-,001	,001	-,074	-1,452	,147
	Share of social housing within municipal boundaries	-,003	,002	-,055	-1,176	,240
	Spread of working area	,001	,001	,088	1,758	,079

dependant variable realized building program rental houses for sale rated to rental housing stock

R-square = 0.014 p = 0.061 and n = 510

The significance of the correlation found is slightly higher but still insufficient (H4b rejected). So scale does not engender better building opportunities as far as rental housing is concerned.

The next step is to analyze the building programs of houses for sale.

Table 9 Linear regression on forecasted opportunities to building of houses for sale

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	-,036	,008		-4,540	,000
	SizeLN	,008	,001	,330	6,778	,000
	Share of social housing within municipal boundaries	-,012	,005	-,122	-2,696	,007
	Spread of working area	-,001	,001	-,051	-1,061	,289

dependant variable forecasted building program houses for sale rated to rental housing stock

R-square = 0.092 p = 0.000** and n = 535

Scale (LN Size) has a positive correlation to the forecasted building program (H4c accepted), although the model explains no more 9,2% of the variance.The share in the municipal housing stock has a negative correlation, which implies that housing

corporations without a dominant position in the municipality are more inclined to build houses for sale. Testing on the realized program shows a sightly weaker correlation, while the share in the municipal stock has no longer a significant contribution to the correlation found.

Table 10 Linear regression on realized opportunities to building of houses for sale

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	-,055	,015		-3,624	,000
	SizeLN	,010	,002	,226	4,513	,000
	Share of social housing within municipal boundaries	-,014	,009	-,074	-1,600	,110
	Spread of working area	-,002	,002	-,036	-,736	,462

dependant variable realized building program houses for sale rated to rental housing stock

R-square = 0.043 p = 0.000** and n = 510

Also hypothesis H4d is accepted with even lower but still significant correlation. Although the correlation between scale and building of houses for sale is not very strong, there is evidence that large housing corporations have better opportunities to build houses for sale.

This finding contrasts with the strategic position of corporations concerning the building of rental houses, where scale provides no advantage.

Considering the fact the building of houses for sale is not a core-business, the question can be raised whether the commercial activity is in the interest of the organization. The common opinion that corporations build houses for sale in order to improve the socio-economic structure of their neighourhoods is partially true. Only 20% of their building programs aim at areas of urban regeneration (Buitelaar, Broek, & Segeren, 2009, p. 9).

General nonprofit literature brings another possible explanation. Steinberg (2003, pp. 291-293) states that nonprofit organizations deploy commercial activities for the profit, while the incomes from the core-business are restricted by regulation and at own will. Assuming this statement, a additional hypothesis (H4e) is postulated, saying that scale-facilitated building of houses for sale generates profit, while the core-business engenders losses. The solvability trend (delta 2006 vi. 2002) is used as

dependent variable, while building for sale is put into a model with other items of the investment and divestment programs of housing corporations.

Table 11 Linear regression on the solvability trend depending on building for sale and other

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	,050	,005		9,493	,000
	Building program houses for sale	,266	,148	,088	1,795	,073
	Building program rental houses	-,226	,036	-,301	-6,333	,000
	Programmed divestment by demolition and joining	-,489	,098	-,215	-4,997	,000
	Programmed acquisition houses of other owners	-1,050	,550	-,076	-1,910	,057
	Divestment by sale of rental houses	,467	,131	,148	3,552	,000

dependant forecasted solvability trend

R-square = 0.271 p = 0.000** and n = 545

Housing corporations have to deal with the fact of their business that rental house building is inremunerative. Compensation is found in the sale of existing rental houses. Building for sale would compensate too if the contribution to the correlation of the model were significant (p = 0,073). The hypothesis (H4e), implying that building for sale adds profit to an economically weak core business, is rejected. Scale provides a strategic advantage at the building of houses for sale. However, this additional activity is not significantly contributing to the wealth of the organization. Thus, the scale-related stategic advantage of better opportunities for building houses for sale is not irrefutably in the interest of the organizations[4].

**4.2 Does large scale operation provide advantages to the executives (agents)?**

If activities are deployed with no connection to the interest of the organization, it is interesting to raise the issue of managerial moral hazards, such as empire building and entrenchment by agents. Recaputilating as so far, expansion of scale does not serve economic interests of the organizations, while the strategic advantage is arbitrary. Therefore it is relevant to ask whether the executives of housing corporations have self-interests in large scale operation. The executive incentive compensation scheme of this nonprofit sector (Comissie-Izeboud, 2004) facilitates mergers, inasmuch scale

[4]The enhanced suppliers risk should be considered too.

of operation contributes 66% to the weighing points of task complexity and moreover, by the clause that allows executives to earn more in a board of directors after a merger than before in their separate tenures. The effect of this very incentive compensation scheme is not yet empirically investigated.

In this paper the issue of agents' self-interest in large scale operation is addressed in the realm of reputation. The hypothesis (H5) is that large scale provides executives a strategic position in the institutional field, termed prominence. Assuming that housing corporations in urban areas make for a job with a higher rate of complexity, the grade of urbanization of the working area is added as independent variable. The hypothesis is presented by means of the next model.

Figure 7 Linear regression on executive prominence depending on scale and grade of urbanization
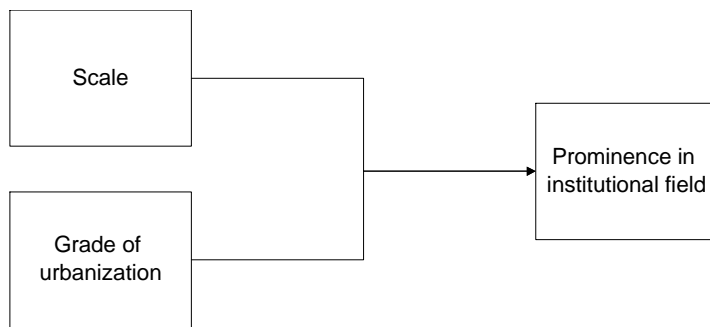
The test results in a remarkably high correlation, reading next table.

Table 12 Linear regression on executive prominence in the institutional field depending on organizational scale and urbanization of working area

	Input	B	Std. Error	Beta	t	Sig.
1	(Constant)	-1,677	,262		-6,404	,000
	SizeLN	,315	,027	,461	11,607	,000
	Grade of urbanization (decending)	-,094	,030	-,124	-3,121	,002

dependant variable realized building program rental houses for sale rated to rental housing stock

R-square = 0.271 p = 0.000 and n = 551

Scale provides a substantial and significant strategic advantage to the executives of housing corporations (H5 accepted). Following the sector's incentive compensation scheme (Comissie-Izeboud, 2004), institutional prominence, inthere called market

leadership, add points to the remuneration levels. Self-interest seems to be implicated. However, it might be very in the interest of the organization having a chief executive that has by grace of prominence immediate access and ties to (other) key actors in the institutional fields. But what is the 'yield' to be gained on the institutional field, as since 1995 state subsidization is no longer granted. Valuebles comprise the political approval of side line activities and the supply of state backed warrants for the financing of side line activities.

A recent study (Koolma H. M., forthcoming) shows that improvident political approval of, and arbitrary financial facilities to side line activities have impelled organizational breakdowns in the Dutch public housing sector. Another failure case shows that a housing corporation with a prominent chief executive has been safeguarded from regulatory intervention for several years while knowingly performing illegal commercial activities and violating integrity codes (Rijksauditdienst, 2009). Prominence can eventually provide obstructions to external intervention, due to the protective force of reputation.

If darksides as such are the only yields of executive prominence, institutional prominence surely conflicts with the interests of the organizations. At any rate, the scale-related strategic advantage of having a more prominent executive is arbitrary due to the lack of thinkable subsequent positive effects in the context of the case.

5. Conclusion and discussion

This article set out to test assumptions about the economies of scale in the sector of Dutch housing corporations against the background of a more general discussion concerning the pro's and cons' of large-scale semi-public organizations. In politics, in the 1980's it became fashionable to attribute positive effects to mergers and the up-scaling of organizations. Classic theories of business administration claiming synergy effects and strong strategic positions in the industry provided a scientific basis for the policies of up-scaling; other classic theories that predicted limited or no economies of scale or the appropriation of possible advantages of mergers by executives at the cost of other stakeholders were ignored.

Due to a number of organizational debacles in the semi-public sector, the tide seems to be turning. The diseconomies of scale and the risks of personal misappropriation in large-scale organizations are on the political agenda. However, so far, there is only limited evidence of the actual effects of up- scaling and little or no insight into the actual driving forces behind mergers in the semi-public sector.

With respect to the Dutch public housing sector earlier research has suggested that there is a negative relation between scale and efficiency. In this paper, detailed analyses were presented to test a number of assumptions concerning the relationship between scale, efficiency, effectiveness and strategic position. Overall, no evidence was found that large scale housing corporations operate at lower costs, or are more efficient when it comes to human related or capital intensive activities. If the smallest corporations are not taken into account, there is also no relationship between scale and effectiveness in terms of investment volume or the engagement in urban regeneration activities.

When it comes to the strategic position of corporations, large-scale operations provide competitive advantages in the sector of building programs for houses for sale, not for building programs in the rental sector. Moreover, the strong position in the former sector has no positive effect on the overall financial performance of large-scale corporations. However, large-scale corporations do bring their executives advantages in terms of personal remuneration and prominence in the institutional field.

With respect to this last element, it is open for debate if this brings any real advantages to the organization as a whole: so far, it seems that large scale corporations have used their prominence to obtain permission for operations with a high risk of damage.

Regarding to politics, the conclusion seems compelling: there is no ground to stimulate or even tolerate further processes of up-scaling in the sector of housing corporations. From a scientific point of view, a number of questions remain. The research presented does not provide insight into the actual motives of the management of housing corporations. Were the mergers undertaken out of economic rationality, to improve the efficiency, effectiveness and strategic position of the organization? Did

executives have the best intentions, but were they guided by taken for granted assumptions instead of well-founded studies into the actual impact of the projected mergers? Did they reflect on the actual organizational advantages of a stronger strategic position, or was big is beautiful the lemma? Or was personal power, prestige and gain the primary driving force behind the mergers in the sector? These questions can only be answered by a careful reconstruction of the actual decision-making processes concerning mergers. Detailed case study research could also provide the necessary insight into possible checks to unwarranted mergers in the semi- public sector.

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