

Longevity in services: the case of the Dutch warehousing companies 1600-2000

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1. Introduction

In recent management literature there has been a lively discussion on the longevity of firms, Several popular books on this subject were published (De Geus, 1997; Collins and Porras, 1999), but also papers in academic journals and academic books (for instance Hall, 1997 and Meyer and Zucker, 1989). These publications seem to have largely escaped the attention of business historians. This paper aims to explore the value of the perspective of longevity for business history. In regard to the theme of this conference, longevity is of special interest because there are reasons to suppose that in some respects service companies may have a better chance to survive in the long run than industrial firms.

Long-lived firms are exceptions to the rule. Nearly 40% of 1983's Fortune 500 companies have dematerialized, 60% of the 1970's list and GE is the sole survivor of the Dow Jones Industrial Index of 1900 (Caulkin, 1995). Overall, empirical studies support the observation that most firms are selected out. Knowledge of the many sources and causes of structural inertia is very extensive, yet empirical support for competitive advantage is weak. Strategic intentionality of managers does not seem to matter much and most managers apparently are mimetic when it comes to selecting and implementing strategies for adaptation and change. Still, some companies seem to defy the tooth of time and continuously influence and adapt to the ever-changing environment. For example, companies like the British company Cambridge University Press (founded c. 1534), the Swedish company Stora (13th century) and the Dutch company Royal Pakhoed and its predecessors (c. 1600) survived for hundreds of years. Why do these corporate diehards survive?

These long-lived companies are a source of interest for both researchers and practitioners. In this paper, we focus on the Dutch firm Royal Pakhoed and its predecessors. Given the facts that Royal Pakhoed still exists after for more than four hundred years and the average life span of an organization is approximately less than 40 years (De Geus, 1997), it is justified to refer to Royal Pakhoed's long-term existence as corporate longevity. The past few years, several authors (Collins and Porras, 1999; De Geus, 1997; Hall, 1997) studied long-lived firms. Their approach was inductive (except for Hall), included multiple companies and focused on processes *inside* these organizations. Indeed they found similar structural and cultural aspects among the long-lived firms. Their work can be considered as the first step on the way to explaining longevity.

However, much of the literature on building and enhancing the organization capacity for longevity and renewal, in reality documents the many and varied ways by which structural inertia rears its ugly head. Moreover, the many prescriptions for speeding change, counteracting resistance to change, installing heroic visionary leaders, empowering bottom up processes, creating structures without boundaries, adopting strategies that escalate competition, etc. all share common characteristic of only focusing on a single variable, process or strategy. Invariably the consequences are only partial answers and partial truths.

This paper aims to take the analysis of long-lived firms to the next level. So far research in the area of longevity has shown that certain organizational characteristics (enablers) enhance the organization's capacity to adapt and thus increasing its chances of survival. In this paper we focus on the challenge of developing theories that inform the question of how organizations can manage sustained self-renewal in time of increasing disorder. We believe that single theme explanations of the adaptation – selection phenomenon have reached their limit. The time is right to abandon naïve selection or naïve adaptation research in favour of considering joint outcomes of intentional adaptation and environmental selection pressures. With a few exceptions researchers have tended not to address the interrelationships between firm-level adaptation and population-level selection. Co-evolutionary models incorporate the premise that adaptation and selection are not orthogonal forces but are fundamentally interrelated. In other words, change is not an outcome of managerial adaptation or environmental selection but rather the joint outcome of intentionality and environmental effects. As a way of progressing beyond partial and idiosyncratic solutions we advance five longevity principles that, in our view, must underlie any theory of organization self-renewal and longevity: a strong position in the supply chain, flexible technology, innovative culture, decentralized structure and a conservative financial policy. It are exactly these features of managerial intentionality that distinguish organization resilience or renewal capabilities of successful long-lived organizations from non-coevolving organizations with a focus on short-term exploitation.

In this paper, we study the underlying longevity principles of Royal Pakhoed and its predecessors during their 400 years' history. This group of firms originates from local transport and warehousing and is still active in tank storage, logistics and distribution under the name Vopak (the result of a merger of Pakhoed and Van Ommeren in 2000). In its turn, Pakhoed was

the result of the merger of two companies in 1967, namely Blaauwhoedenveem (established around 1600) and Pakhuismeesteren (established in 1818).

First of all, on the basis of a co-evolutionary theory we develop a conceptual framework of long-lived organizations that connects firm longevity factors with competitive dynamics. To illustrate this framework of long-lived firms, we investigate the ongoing co-evolution between Pakhoed and its predecessors' longevity principles and the various competitive regimes, namely the co-operative age (1600-1815); the birth of warehousing business (1815-1860); the move to the waterfront (1860-1940); and the transformation and diversification regime (1945-2000). The findings of the study show that major initial longevity principles have been preserved and further refined during these regimes and that the warehousing companies' successful strategic adaptations were highly dependent on these founding principles.

2. The Long-Lived Organization: A Co-evolutionary framework

Why are firms long-lived? How do they reconcile the conflicting forces for change and stability? How do they respond and learn at the same time as promoting order and control? Up till now managerial theories are still in their infancy and often consider longevity from either a purely selection or adaptation perspective (Lewin and Volberda, 1999). Selection perspectives view long-lived firms as highly restricted by resource scarcity, convergence to industry norms, and structural inertia. In other words, the strategic activities of successful firms are very similar and limited to strengthening and exploiting their existing core competencies. By contrast, adaptation perspectives suggest that long-lived firms can and do change, overcoming their rigidities. That is, they can behave differently and explore new competencies.

It is becoming increasingly obvious that single-theme explanations for longevity have reached their limit and that strategy and organization theory scholars should adopt research strategies that consider the joint outcomes of managerial adaptation and environmental selection instead of naïve selection or naïve adaptation. (Lewin & Volberda, 1999; Volberda & Lewin, 2003). No single theory of selection or adaptation explains how and why firms co-evolve and develop over time as they do (cf. Dooley and Van de Ven, 1999; Van de Ven and Grazman, 1999: 186; Van den Ven and Poole, 1995). In our conceptual framework for the analysis of long-lived firms, we consider the joint interaction of the evolution of the firm and its competitive environment. In this respect, we see the process of longevity as a balancing act, between forces at the environment and those of

the firm. As March (1991) suggests: "...maintaining an appropriate balance between exploration and exploitation is a primary factor in system survival and prosperity".

The organization optimally equipped for long-term survival is likely to be a flexible organization that reconciles the conflicting forces for change and stability and maintains a dynamic fit with its environment. Those tensions have been variously described in the organization literature as change versus preservation (cf. Poole & Van de Ven, 1989; Volberda 1996), adaptation versus selection (cf. Baum, 1996; Lewin & Volberda, 1999) and exploration versus exploitation (cf. March, 1991; Levinthal & March, 1993). Moreover, in solving these tensions many scholars have focused on discrete states in terms of hyperadaptive organization forms and strategies, using concepts such as disposable organizations (March, 1995), poised organization (Kauffman, 1995), at the edge of chaos (Brown & Eisenhardt, 1998; Kauffman, 1995), dissipative structures (Prigogine & Stengers, 1984), semi-structures (Brown & Eisenhardt, 1997), hypertext form (Nonaka & Takeuchi, 1995) or, more generally, flexible organizations that somehow internalize friction between change and preservation (Volberda, 1996, 1998). Examined less frequently is how corporations deal with these tensions over time. How do firms progress over time? Although March (1991) and Levinthal (1997) have used simulations to suggest that the optimal path for the firm is one of balanced exploitation and exploration, longitudinal empirical studies of micro-adaptations over time are still limited.

Empirical studies on corporate longevity are sparse. In terms of our longevity model, most studies focused on the underlying longevity principles, that is, common characteristics that are assumed to be constant over time. In this connection, Meyer and Zucker (1989) demonstrate that performance is not a prerequisite for firm survival. They found that this could be explained by the fact that dependent actors as well as owners, because of multiple interests and motivations, sometimes prioritise the preservation of the organization at the cost of objectives like efficiency. Hall (1997) also underlines that the firms he researched did not prioritise profitability. In stead 81% of the respondents chose financial strength as priority number one. De Geus also shows that long-lived companies display financial risk-averse behaviour.

De Geus (1997) points out that long-lived companies found a perfect balance between probing the environment, keeping track of environmental changes, allowing internal experiments and maverick behaviour on one side and a coherent organization and strong sense of identity on the other. De Geus concludes these companies are good at managing change. Collins and Porras

(1999)' findings connect to that of De Geus. They also stress the importance of a core ideology and the importance of a relentless drive for progress. Three mechanisms are mentioned to stimulate this drive for progress, which are an almost unreasonable belief in the organisation, a high level of action and experimentation and continuous self-improvement.

De Geus mentions a tolerant or decentralized structure. Hall finds this to be true, although he ascribes the tolerance to the management style. Of the respondents in his research population 45% picked the tolerant management style to be the closest to their management reality. However 41% picked the command and control management style, this could be explained by the fact that Hall mainly researched small entrepreneurial firm managed by a single person, or family owned, whereas De Geus studied major international companies. Hall stresses the importance of a tolerant management style because it allows for ambiguity, positive feedback and the renewal of mental models, in this way enabling non-conforming behaviour and data that drive change.

Finally, Eikelboom (2002) has elaborated on the studies mentioned above and (re)defined some continuity enhancing factors, of which the location in the supply chain and the versatility and flexibility of the technology deserve special mention.

The table below is an overview of the characteristics mentioned by the authors that have been discussed. Notice that the authors call for experimentation, innovation, progress and change. Not for a strategy of core competence, routines or resources. Indeed they describe an organisational culture that facilitates these processes of change; a tolerant management style, a strong sense of identity, preservation of a core ideology and sensitivity towards the environment. A decentralized and tolerant structure is also mentioned. Profitability should not be the first priority, but financial strength and financially risk adverse behaviour, or, in other words, a financial conservative policy.

Table 1: Overview of the characteristics of long-lived firms mentioned in current literature

<i>Characteristic</i>	Consequence	Mentioned by authors:
Sensitivity to the environment	Adaptation of organization	De Geus, Cohen & Levinthal, Volberda
Strong position in the supply chain	Embeddedness in the network	Eikelboom
Strong sense of identity	Preserving core ideology, stewardship,	Collins & Porras, De Geus, Hall
Tolerance, decentralisation	Activities on the margin	De Geus
Tolerant management style	Room for ambiguity, positive feedback, Renewal of mental models	Collins & Porras, Hall
Versatile and flexible technology	Flexibility	Eikelboom
Financial conservatism	Independence, flexibility	De Geus, Hall
High level of action & experimentation	Drive for progress	Collins & Porras, (March)
Bold missions	Drive for progress	Collins & Porras
Continual self-improvement	Drive for progress	Collins & Porras

On the basis of the overview, we have defined five basic factors that are expected to be responsible for the longevity of organizations:

1. a strong position in the supply chain
2. a versatile and flexible technology
3. an innovative and tolerant culture
4. a decentralized structure
5. a conservative financial policy

All factors contribute directly and indirectly to a high sensitivity to the environment or, in other words, a high absorptive capacity. The position in the supply chain (1) is vital for the longevity of

the firm involved, because the way its activities are intertwined with the operations of firms in other parts of the chain codetermines its continuity. In particular the degree to which the relation of the firm with its customers has a personal (close and intensive) character shapes the sensitivity to environmental changes. In this respect, a versatile and flexible technology (2) reduces the risk of obsolescence and thus increases the chances of survival of the firm in question. Next, the culture of long-living firm should be innovative or, in other words, tolerant to new initiatives (3). Among other things, this implies that new managers should at least be partly recruited from the outside. Furthermore, the literature suggests that a decentralized structure fosters the longevity of organizations (4). Such a structure embodies transparency as well as tolerance for innovations and also enhances sensitivity to changes in the environment. Finally, a conservative financial policy (5) results in ‘slack’, that provides firms with more leeway and flexibility than companies that decide on the volume of debt capital they use and the pay-out of profits mainly to maximize profits for the owners of the firm’s capital. Besides qualitative information, we use two quantitative indices for measuring the degree of financial conservativeness: a) the ratio of net profits to paid interest, the ‘interest coverage’¹ (the higher the interest coverage, the more financial conservative) and b) the pay-out ratio of net profits to the owners (the higher the pay-out ratio, the less financial conservative).

In the empirical part of paper, we deal with these factors separately. However, as the firm’s position in the supply chain is to a high degree innate to the nature of the business, it is dealt with together with the analyses of the general environment and strategy each period starts which.

¹ This solvability measure is used here in the absence of reliable balance sheet data of one of major predecessors of Pakhoed, Pakhuismeesteren, well into the 20th century).

3. Pakhoed and its predecessors under different regimes from 1600 tot 2000²

3.1. The Co-operative Age: start of Pakhoed's predecessors as mini-guilds (1600-1815)

(1) The position in the supply chain

Pakhoed originates from the 17th century Amsterdam weigh-porters cooperatives, called *vemen* (*veem* in singular). The 17th century was Dutch Republic's golden age. Amsterdam developed into the most prominent European centre of trade and in some respects even functioned as a central staple market. Among the companies providing auxiliary services to the trade many different occupational groups could be distinguished who were concerned with the transport of goods. Many corporations for the companies serving the trade were tied to a certain number of members by city regulations. The permission of the municipal government was required for the appointment of the members of these guilds. There were several kinds of porters active in 17th century Amsterdam, among them specialized groups like the beer, grain and peat porters but also a corporation of porters that took care of the remaining miscellaneous goods, called the weigh-house porters. An ordinance dating from 1524 - and this was confirmed several times afterwards - gave the workers for the weigh-house the sole right to weigh-house portering. A number of so-called *vemen* were formed among the members of the weigh-house porters guild, probably as early as the sixteenth century (the first official mention of the *vemen* occurs in the ordinance on the weigh-house porters of 26 March 1616). A *veem* was a cooperative of weigh-house porters which in practice had between three and ten members. In other words, the *vemen* were a kind of mini-guilds. The term 'veem' gradually acquired the exclusive meaning of a cooperative of weigh-house porters. As they only became warehousing companies in the modern sense of the word during the nineteenth century, we will stick to the – untranslatable – term *vemen* here. The *vemen* are regarded as a phenomenon which was initially only found in Amsterdam.

The *vemen* operated in a very regulated environment. The fees the merchants would have to pay to the *vemen* for their services were regulated by the government, depending on the type of goods carried. In 1654, the Amsterdam burgomasters imposed restrictions on the *vemen*: for

² The empirical part of the paper is based on an extensive study of archival records and secondary literature as well as on interviews. Unless indicated otherwise, the sources of the empirical information can be found in Van Driel (1994), Kamerbeek (2000), and Eikelboom (2002).

instance, it was no longer permitted to set up a *veem* without notifying and receiving permission from the municipal government. The government succeeded in stabilizing the number of *vemen*. In 1685 there were 22 *vemen*. That number remained virtually constant for some time afterwards, for as late as 1766 there were still 22 *vemen*, although the composition of the group had changed somewhat. All in all, not only the fees, but also lack of competition by outsiders was guaranteed for the *vemen*.

In the porters' work, the merchants' warehouses where the goods were stored were often the starting or finishing point of the transport order. It was natural that the *vemen* would also be involved in the act of storing, although – unlike the porters' work – the merchants were not forced by the local government to have the activities within their warehouses done by guild members.

By forming *vemen*, the weigh-house porters met the merchants' need for mutual differentiation. When groups of weigh-house porters went to work permanently for particular merchants as *vemen*, this meant that the work was distributed less arbitrarily than by dicing for orders which was customary among the weigh-house porters in the sixteenth century. The Vereenigde Oost-Indische Compagnie (the Dutch East Indies Company) or VOC was the largest customer of the *vemen*. The VOC let the *vemen* work for them according to a tour-de-role system. After the VOC was discontinued in 1799, some of its employees called the 'pakhuismeesteren' (masters of the warehouse) would found private warehouse companies in both Amsterdam and Rotterdam in 1818. One and a half century later, The Rotterdam 'Pakhuismeesteren van de Thee' would merge with the remaining *veem*, Blaauwhoed, into Pakhoed.

(2) Technology

The work the *vemen* performed was of a very 'low tech' nature. Specific skills had to be learned in order to practise a craft, whereas work in the auxiliary companies - particularly when it only involved carrying goods - required scarcely any special ability. The *vemen* used very simple equipment for performing their services, such as trolleys, pulleys, ropes and hooks (probably carts were also used, however, there existed a separate group of haulers). Initially the *vemen* did not even have their own offices, although they also performed administrative work for the traders. All in all, the flexibility of technology was very high; the *vemen* could adapt very easily to changing

preferences of their customers, for instance when they started to ask the *vemen* to mediate in hiring warehouse space during the eighteenth century.

(3) Culture

The *vemen* developed a very strong identity. The colour of the weigh-house porters' hats was a favourite way to mark their identity: hence names such as the Blaauwhoedenveem, Roodhoedenveem and Witthoedenveem (Blue Hats, Red Hats and White Hats). In this way, a merchant could easily recognise the members of his permanent *veem*, but the colour or shape of the hats also acted as a kind of hallmark. The *vemen*'s culture was richer than this. For instance, they developed their own 'language' of terms for all kinds of activities, situations and equipment.

The culture of the *vemen* was further characterized by subservience to their customers, the traders. This helped them to be responsive to their customers' changing needs and preferences. However, the *vemen* did not entirely lack initiative, as is shown by the fact that at least some of them began to offer traders warehouse space during the eighteenth century. Furthermore, integrity and trustworthiness were key cultural elements; after all, the traders had to be sure that their valuable goods were in safe hands during transport and other handling. In this way, a culture of responsiveness and integrity was formed.

(4) Structure

The *vemen* continued under the same name because new *veem* contracts were concluded by different persons each time. The enforcement of loyalty to the *vemen* on the part of the brothers was mainly achieved through the contracts. As cooperatives, the *vemen* were egalitarian institutions: the fact that all brothers received the same share in the profits suggests that they stood on an equal basis – a reflection of the 'live-and-let-live' ideology behind the guilds.

However, the *vemen* also reflected the hierarchical relations that prevailed in the corporatist society they were part of. The hierarchy which existed in the *veem* was based on age. The youngest 'brothers' had to obey the senior members, as can be seen from various contracts. According to some of these the youngest brothers were also the first to go into action every day as soon as there was work to be done. The senior *veem* brother, or at any event the brother most skilled in that respect, was responsible for obtaining work from the merchant. That gave him a higher status in the *veem* than the younger brothers. In this way, by importing the hierarchical relations from the society

at large, a coarse division in management and operational tasks between the members was created. In addition, the *veem* brothers acted as employers for the members of the weigh-porters' guild who were not part of a *veem*, the so-called free men. We may conclude that as egalitarian institutions the *vemen* as such possessed a decentralized structure, but that the prevailing societal circumstances also created a certain 'management hierarchy' within the *vemen*. The cooperative structure represented a nice fit with the general socio-political environment. Crucial however was the legacy of the cooperative structure for the later development of the *vemen*.

(5) Financial policy

The three or more weigh-house porters that joined forces in the *vemen* worked on a collective basis: all the money earned by the brothers in the *veem* was put into one 'purse' from which each was paid an equal amount weekly. Every agreement contained one or more clauses concerning a crucial advantage which the *vemen* offered, namely that when a *veem* brother was ill or unfit for work he nevertheless received his due share of the income weekly just as if he had been working normally. This payment in the event of illness was very generous by the standards of those days.

Apart from special sickness benefit, the *veem* brothers and their families often also enjoyed their own old age and death benefit payments from which the so-called free men (weigh-house porters who were not part of a *veem*) were excluded. As against this, however, in order to join a *veem* the weigh-house porters had to pay a sum of money. Apart from the fact that the various benefits paid by the *veem* were funded with this money, the levy of an entrance fee had another justification: as a *veem* member a weigh-house porter was able to earn much more than he could as a free man as a result of contacts with certain merchants. The oldest contractual record of this kind dates from 1630 in which the entry fee was fixed at 550 guilders. This was no mean amount, it was higher than the annual wage of a weigh-house porter.

The levy of an entry fee was the spur to capital formation, for obviously not all of this money went to the benefits paid in connection with sickness, old age or death. Characteristic was however that the profits of the *veem* were paid out to the brothers each week. This can of course hardly be called a conservative financial policy. However, in the protective climate in which the *vemen* operated they could afford this policy. Furthermore, fixed costs were virtually absent; the costs consisted almost entirely of the *veem* members' labour input. In other words, the financial

risks were in fact transferred to the individual *vemen* members: one could say that the *vemen* as such followed a rather risk averse finance policy.

3.2 The birth of the warehousing business (1815-1860)

(1) Position in the supply chain

Around 1800, the environment in which the *vemen* operated changed dramatically. The French occupation brought the liberal ideas of the French Revolution to the Netherlands. In line with this philosophy protectionist organisations like the guilds had to disappear. They were officially abolished in 1798, but nevertheless clung on stubbornly to existence for years after that. The final curtain only fell on the guilds in 1822. Although a voluntary corporation was formed in 1827 under the name ‘Workers for the Trade’ as a successor to the weigh-porters guild, the protection by the local Amsterdam government was discontinued. All in all, the population of *vemen* remained intact almost completely until at least 1850. The *vemen* survived by transforming the nature of their business. Gradually their activities changed from local transport and accompanying work in the merchants’ warehouses to warehousing. Already in the eighteenth century, at some occasions, the *vemen* mediated when traders searched for storage place for their goods. During the nineteenth century transport, trade and storage, activities that often have been organized by one economic actor (the trader) before, were increasingly carried out by specialized firms.

As regards warehousing, an important trigger to this fundamental change was the creation of an independent third party warehouse business by two distinct companies in Rotterdam and Amsterdam in 1818, both called Pakhuismeesteren van de Thee. The Rotterdam Pakhuismeesteren van de Thee was to become one of the two constituents of Pakhoed. These ‘tea establishments’ started their activities with the handling and processing of a specific product, tea. In Amsterdam, and originally also in Rotterdam, the founders of the tea establishments were former employees of the Dutch East India Company (VOC) that was discontinued in 1799. An important element was the issue of so-called *celen* (warehouse warrants) – a continuation of a VOC-practice, but now applied to the Dutch tea trade as a whole. The two Pakhuismeesteren van de Thee acquired a monopoly position in the storing and processing of tea in their respective locations. Once the tea was concentrated at one establishment, or at least came under the charge of

one company, it was difficult for an outsider to acquire a position in the processing of this product which called for such special treatment. In addition, in Rotterdam the Pakhuismeesteren could continue the use a part of the VOC's warehouse situated at the Boompjes, where ships could berth in the immediate neighbourhood. This premises with its dry lofts was a preferred locality for storing tea (and later also other goods); controlling the East India House gave Pakhuismeesteren an invaluable lead against eventual competitors.

After 1818, the use of warehouse warrants was extended to (parts of) the trade in coffee and other (mainly tropical) products. Around 1850, the Rotterdam Pakhuismeesteren van de Thee started to diversify in the warehousing of other products than tea, in the firm name the extension 'van de Thee' was dropped at that time. All in all, the Pakhuismeesteren gained a position in third party warehousing by taking initiatives, not just by passively reacting to (perceived) tendencies. The *vemen* imitated Pakhuismeesteren in gradually transforming their business to fully-fledged warehousing companies from the early 19th century on.

One would expect that in particular smaller traders would outsource their warehousing activities. Paradoxically, it was a large trading body that performed a crucial role in the 'take-off' of Pakhuismeesteren and – in particular – the *vemen* in the warehousing business. In 1824, the Nederlandsche Handel-Maatschappij (Dutch Trading Company) or NHM was founded under royal protection. This NHM was more or less meant as the successor of the VOC, although only in the economic sphere. The government gave NHM the monopoly on the trade with the resource rich Dutch East Indies. One of its most important aims was to revive the Dutch staple market for certain goods. This included the farming out of transport and warehousing activities to third parties, although the NHM was large and financially strong enough to undertake these activities itself. Around 1858, it decided to source out virtually all of its warehousing work to several *vemen* acting in combination. This NHM policy gave the *vemen* involved an invaluable leg up in their transformation to warehousing companies. In addition, they could benefit from long standing, personal relations with their customers. The well-known trading house Van Eeghen (itself a nice example of longevity in a sector with very few survivors in the long term) functioned already as a principal of Vriesseveem in the 1780s; in the 1880s it still was. Similarly, the relation of Blaauwhoedenveem with another famous trading house, H.Th.G. Crone, goes back to the eighteenth century; partners of this family firms functioned as supervisory directors at Blaauwhoedenveem from 1856 to well into the twentieth century.

(2) Technology

The founding of the Pakhuismeesteren van de Thee in Amsterdam and, in particular, in Rotterdam in 1818 was the major event in the period studied here. The base of the new ventures were the commercial and technical capabilities concerning the tea business the founders had gained during their employee-ship of the VOC. Gradually, in the first half of the 19th century, the *vemen* started to hire and eventually also buy warehouses too. This implied that their technology became less flexible compared to the situation during the Ancien Regime. However, the *vemen* could hire small warehouses or only parts of them, for short periods, if they wanted. Furthermore, the actual handling of the goods kept its manual character.

The warehouse warrant was of course a very flexible new ‘technological’ element. By the *vemen* themselves, and also in the empirically oriented Dutch business economics literature, the warehouse warrants were considered the basis of their existence. Recording the goods which were kept under warehouse warrant had a number of advantages. The buyer thus had evidence that the consignment was his property. He was therefore assured of the identity, quality and weight of the product he had purchased. The production of the warehouse warrant provided proof for the warehouse company that the consignment concerned was the property of the buyer, after which it could be delivered. The warehouse warrant had other commercial merits. By means of these generally recognised proofs of storage it was possible to trade goods without actually having to remove the consignment concerned from the warehouse. It was sufficient to hand over the warehouse warrant. It was also possible to borrow money on the basis of possessing a warehouse warrant. This was a very important characteristic of such warrants, for buyers could use the proof of storage to finance their purchases. However, records of the Dutch Central bank reveal that borrowing money with goods in general and warehouse warrant in particular as collateral did not gain much practical importance during the nineteenth century. Their symbolic value for the *vemen* was however very high: the official right to issue warrants was a major competitive vis-à-vis newcomer warehousing companies that did not have the reputation and commercial links of Pakhuismeesteren and the *vemen*.

(3) Culture

Both Pakhuismeesteren van de Thee’s were newcomers in third party warehousing in 1818, but the partners of the Rotterdam firm already had a good reputation that was gained in other

activities. From the beginning, the background of the Rotterdam Pakhuismeesteren's managers differed from their Amsterdam colleagues'. Within a few days after the announcement of the two ex-VOC 'pakhuismeesteren' to found a tea establishment in Rotterdam, one of them died. The commission agent H.C. Voorhoeve and the Dutch gin manufacturer E.P. de Monchy took over the torch from the two Rotterdam ex-pakhuismeesteren. Their broad experience and business views are a plausible explanation of their diversification into the processing and warehousing of other goods than tea. Unlike the *veem* brothers, these Rotterdam Pakhuismeesteren partners were part of the local economical elite. This certainly helped them to develop and sustain their warehousing activities. In both Pakhuismeesteren, recruitment from within the founders' (extended) families became the rule. In the case of the Amsterdam Pakhuismeesteren van de Thee this certainly contributed to a certain rigidity; apart from an adventure in coffee between 1828 and 1858, they stucked to the tea business until its acquisition by its Rotterdam namesake in 1959.

The astonishing continuity of the *vemen* after the liberalisation in 1813 should first and foremost be ascribed to their culture. Their reputation helped them to realize their transformation of activities on the basis of a more or less given custom that they inherited from the guild era. The longevity of the *vemen* created its own momentum. When the NHM outsourced its warehousing activities to third parties, the *vemen* were a natural choice. The *vemen* were able to carry over their age-old reputation to the new economic circumstances of the nineteenth century and to connect their good name to the issue of warehouse warrants which became to symbolize the status of trustworthiness and integrity.

Another crucial cultural feature was the continued openness of the *vemen* to outsiders. After the liberalisation, a trend towards the inheritance of membership of a *veem* within particular families occurred. For instance, the Klyn family was represented in the Blaauwhoedenveem throughout the nineteenth century. However, like before, new members were usually recruited from outside. Given the lack of an elaborate administrative apparatus, true recruitment from inside was virtually impossible: entering the *veem* was an all of nothing issue. Recruitment from outside could have important strategic effects. For instance, in the case of Vriesseveem, the transformation to a warehouse company took place parallel in time with the entrance of a new *veem* member in 1855 (a certain mr. Eilers), who already possessed or controlled several warehouses.

(4) Structure

The both Pakhuismeesteren van de Thee's were started as regular partnership (family) firms. One can suppose that centralization must have been higher here than in the case of the *vemen*. On the other hand, the senior partners of the Rotterdam firm normally concentrated on their trading activities and left the daily supervision of the warehousing business to a junior partner, who must have had a relatively high degree of autonomy.

The structure of the *vemen* remained much the same during the first half of the nineteenth century. However, the issue of warehouse warrants to traders by the *vemen* led to a change of the formal structure after mid-century. In December 1855 the Nederlandsche Bank proved willing to recognise the warehouse warrants of the Blaauwhoedenveem as security. In issuing officially recognised bearer warrants the Blaauwhoedenveem would thus acquire the same status as Pakhuismeesteren. One condition of the DNB for accreditation was the appointment of two directors acceptable to it who had to supervise the activities of the *veem*. This led Blaauwhoedenveem to abandon the old cooperative form after about 250 years and replace it on 1 January 1857 by a partnership firm. The *veem* was given the new name of 'Blaauwhoedenveem onder firma Lusink, Klyn & Co.' The main reason for conversion into a partnership firm was probably that the use of a company name made a better impression upon the outside world. All the warehouse warrants were signed by the managing partners (B. Lusink, H.J. Klyn and C.H.L. Klyn) who were mentioned by name in the circulars and were generally those who gave their names to the firm.

The example of the Blaauwhoedenveem was followed by the other *vemen* which also started issuing warehouse warrants acceptable as collateral, or were already doing this and therefore converted themselves into partnership firms. It is important to stress that the partnership firms did not bring about any change in the administrative organisation of the *vemen* which kept the mixed egalitarian-hierarchical nature. Although the managing partners could give their names to the firm, they did not acquire any greater interest in it than the working partners. The second condition required by the DNB was to deposit securities worth at least 50,000 guilders with it as a guarantee for any damage which it might unexpectedly suffer in taking custody of the warehouse warrants issued by the company. Blaauwhoedenveem had one hundred 500 guilder shares printed, of which each member bought ten. In this way everyone contributed one-tenth to the 50,000 guilder. Some members took out a kind of loan for this. The cooperative idea was

evidently still so strong that a substantial increase in the financial requirements did not lead to the forced resignation of less well-to-do members of the *veem*. In this way, the partnership firm was effected in a way that ‘closed’ the *veem* to unwanted outsiders, but compared to a family firm the structural barriers to take in new entrants from outside remained low.

(5) Financial policy

Undertaking warehousing activities eventually implied investments in real property and thus a serious increase of risk compared to the porters’ work of the *vemen* before the nineteenth century. However, on the other hand warehousing guaranteed a relatively stable flow of income, during economic downturns the warehouse companies’ income from keeping the goods often even increased because traders were less able to sell their goods. In addition, the risks were relatively low too because when debtors failed to pay their bills, warehouse companies were permitted to sell the goods in question for their own account.

The Pakhuismeesteren policy could be very well be described as financially conservative. Formally, the profits were fully distributed to the partners each year. However, they deposited these profits at their private accounts at Pakhuismeesteren. Only a part of these sums were used for private consumption or other purposes by the partners; in fact these accounts represented retained earnings. The partners’ other activities gained them enough income to facilitate this policy.

The financial structure of *vemen* that took the shape of a partnership firm did not differ, in fact, from the abandoned cooperative form. The extent to which the simple financial structure of the *vemen* was preserved is clear from the fact that after 1857 the Blaauwhoedenveem still had to ask the partners to make up a cash deficit on several occasions. The *veem* did thus stick to age-old financial practices in an environment that seemed to ask for a more elaborate policy in this field.

3.3. The move to the waterfront (1860-1940)

(1) Position in the supply chain

The industrial revolution in manufacturing influenced the position of the *vemen* only indirectly. The strong growth of the trade in finished articles was largely irrelevant to warehouse companies based in port cities. The same holds true for the surge in ore and coal shipments through in

particular the port of Rotterdam, and to a large degree also for that other important bulk product: cereals (these three major cargo flows made Rotterdam the largest Dutch port and already before the First World War also the largest European one). The primary domain of the *vemen* remained the warehousing (including handling) of raw tropical materials like coffee, tea, tobacco, rubber, cotton, all kinds of oils, seeds and fats, etcetera. Industrialisation stimulated the import of these goods through the European ports. According to a crude measure, the arrivals of these commodities in Rotterdam became four times as high between 1880 and 1913.³ From 1904, the *vemen* started to make use of cold stores, which extended their field to the warehousing of (other) fruits, vegetables and, in particular, meat.

Industrialisation also triggered the introduction of one new raw material in the European market that eventually would become by far the most important market for the warehousing companies: crude petroleum. Still, by 1913, Rotterdam mineral oil arrivals represented only one third of the volume of the incoming flow of the tropical materials just mentioned (and they were dwarfed by the shipments of ore, coal and cereals through the port).

Nevertheless, it were the first arrivals of petroleum cargo that initiated the move to the waterfront of the warehousing companies that had up to then concentrated their activities in warehouses in the city. Safety reasons were mainly responsible for this. In 1862, three years after drilling operations had brought the first petroleum to the surface in America, the first barrels of oil were shipped to Rotterdam and stored in the State Bonded Warehouse in the East India House it shared with Pakhuismeesteren. Pakhuismeesteren offered to store this oil on warehouse warrants as early as 1863, but because of the great fire hazard - about which great concern had arisen in Rotterdam at the time of the first imports - there was not a single company which was prepared to insure the necessary storage space. The solution was to have premises on a separate site, on the waterfront itself.

Probably, the stake the De Monchy family had in trading activities next to their involvement in Pakhuismeesteren, helped them to recognize the prospects of warehousing the new product of petroleum in an early stage. It was the beginning of a continued presence of Pakhuismeesteren in oil storage, from 1888 more and more in tanks. Almost from the beginning, the tank storage became

³ For the data on cargo flows through Rotterdam mentioned here and elsewhere in the paper, see <http://www.fhk.eur.nl/websites/ra/sheets.html>. The volume of raw tropical goods was estimated by adding the arrivals of gums, wool, cotton, raw sugar, oilseeds, and other luxury goods and food preparations (which include coffee, cocoa, tea, spices and tobacco).

responsible for a major and in several years even the lion's share of Pakhuismeesteren's income. Initially, the De Monchy family tried to monopolize both petroleum trade and petroleum warehousing in Rotterdam. When the large oil companies, in particular Standard Oil, started to get worldwide oil production and trade in their grip, Pakhuismeesteren partners wisely withdrew from the oil trade. Its 'first mover advantage' helped Pakhuismeesteren to maintain a position as an independent oil storage company in an industry characterized by a very high level of vertical integration. Pakhuismeesteren's tankparks acted as 'overflow' terminals for the majors in the oil business and also served the needs of the intermediate traders in oil that managed to survive.

Unlike the oil sector, in the dry cargo business a process of fragmentation instead of concentration became visible after 1870, when the NHM began to lose its prominent position in the trade in tropical materials. Nevertheless, the *vemen* too started to occupy sites at the waterfront, for handling and storing general cargo. In this way, they reacted to another vital element in the industrialization process: the advent of steam shipping. Steam ships were much more expensive than sailing ships and therefore their laytime in the ports had to be kept to a minimum. At the same time their loading capacity became much higher than that of sailing ships, which intensified the need for faster loading and unloading. It was certainly not self-evident to match this revolutionary change in maritime transport with large warehouses on deep-water sites, located directly behind the quays where the ships were discharged and loaded. For instance, in German seaports Bremen and Hamburg, it was decided to build a 'warehouse quarter' in part of the city that was at some distance of the quays.

In this process of moving to the waterfront, the *vemen* extended their activities to Rotterdam: in 1871 the members of Vriesseveem were the first to found a separate partnership in this port which outstripped Amsterdam from the 1880s on. More and more, Pakhuismeesteren and the *vemen* became competitors in Rotterdam.

The strategy of the Pakhuismeesteren and the *vemen* to transfer more and more of their warehousing activities to the waterfront had important consequences for their position. Deep-water space was a scarce good in the ports. Once situated on the waterfront, the *vemen* possessed a collective monopoly which strengthened their position considerably. In tank storage this effect was counter-balanced by the presence of the oil majors' own terminals, but on the other hand Pakhuismeesteren could gain a lease of its site for no less than 75 years.

At the end of the nineteenth century, the warehousing business in the Dutch seaports grew impressively. The insured value of the goods stored on warehouse warrants by Blaauwhoedenveem increased from about 5.5 million guilders in 1886 to 13.7 million guilders in 1895. After that there was little further rise in this value, which even worked out at a substantially lower level in the period 1905-1910, but from 1911 onwards it went up again to 17 million in 1913. This period was also characterized by a scaling up in the organisations involved. Between 1876 and 1906, both Blaauwhoedenveem and Vriesseveem acquired other old *vemen*. The consolidation reached its zenith in 1917, when the two firms merged into Blaauwhoedenveem-Vriesseveem and the much smaller Het Nederlandsche Veem, itself a product of a merger of three *vemen* in 1896/1897, took over Amsterdamsche Veem.

After a short lived post-war boom, the interwar years were meagre ones for the warehouse companies, in particular of course during the Great Depression. Already in 1926 the turnover of Blaauwhoedenveem-Vriesseveem started to decline both in Amsterdam and Rotterdam, a development that was in accordance with stagnating relevant dry cargo arrivals in Rotterdam. The company started new warehouse establishments in several foreign ports and in the Dutch East Indies, but for the rest the interwar years were mainly a period of stagnation, low profit margins, consolidation and cost reduction in the warehousing business. Only mineral oil arrivals showed a healthy growth during most of the interwar years, from the mid-1930s they became higher than the relevant incoming dry cargo flow. Edible oil imports stagnated however, nevertheless Pakhuismeesteren started to store these kind of oils in tanks too from 1920.

(2) Technology

The fact that the warehousing companies could undertake both product and geographical diversification by simply opening new establishments at new locations shows their enduring technological flexibility. The possession of warehouses in the city did not lead to serious forms of inertia, because the increasing cargo flows to the Dutch seaports, in particular Rotterdam, took care of sufficient utilization of old and new warehousing capacity. Of course, the new large warehouses at the waterfront implied significant fixed costs for the *vemen*. For instance, in Amsterdam the triggering event of the move to waterfront was the building by the municipality of Amsterdam of the Handelskade (Trade Wharf), situated on deep water and with railway connections. The N.V. Handelskade built a 200 metre by 21.5 metre warehouse on this site in

1883. These were tremendous dimensions by the standards of the time: the capacity was equal to dozens of the premises which were operated by the *vemen* in the city. But as all kinds of (dry) goods could be stored in the warehouses, flexibility remained high. Only Pakhuismeesteren's tankparks represented a dedicated asset that could not be used for other (dry) goods.

(3) Culture

The early venture into oil storage showed the openness of Pakhuismeesteren towards new developments. Without doubt, the broad range of trading activities undertaken by the Pakhuismeesteren partners was responsible for their early recognition of the potentials of this new trade.

Again, also the *vemen* profited from their open culture in transforming their activities. Whereas Vriesseveem became active in Rotterdam from 1871, by entering partnerships with Rotterdam based firms in 1871 and 1875, it was an outsider, one mr. Hol, that convinced Blaauwhoed to start operations in Rotterdam too. In 1877 he formed a partnership firm with the Blaauwhoedenveem partners in Rotterdam.

The most important innovative contribution by a newcomer was made at Blaauwhoedenveem in Amsterdam. The planned activities by the above mentioned N.V. Handelskade represented a great danger for the *vemen* in Amsterdam. Not only did it intend to load and discharge ships and store goods, but it also aimed to act as a real warehouse company by processing goods and issuing *celen*. It was a new member who prompted the Blaauwhoedenveem to take active steps to combat the threat to its competitive position. In 1883 Blaauwhoedenveem asked G.J.P. la Bastide - a man blessed with great vision and energy who had been a proxy holder of the ship agency De Vries & Co. for 22 years - to be the successor of a retiring partner. Not without troubles, he won his fellow partners for a joint operation with the N.V. Handelskade that had encountered significant setbacks. This absorption of the N.V. Handelskade gave Blaauwhoedenveem an invaluable lead vis-à-vis its competitors, that imitated by renting terrains and building warehouses at the Handelskade too. In Rotterdam however the roles were reversed: here Vriesseveem was the first mover and Blaauwhoedenveem played the second fiddle.

The developments at the Nederlandsche Veem are a nice illustration of the importance of new blood for transforming activities. The Nederlandsche Veem was formed by the merger of three old Amsterdam *vemen* in 1896/1898. After an unfortunate adventure in Rotterdam in

combination with a Rotterdam grain forwarding company, that brought the company near to bankruptcy, in particular one old Amsterdam partner kept on complaining and grumbling about this failure, which he blamed to his fellow managers. This inward looking attitude of several of its managing directors was a major reason for the stagnating development of this warehousing company. Nevertheless it survived until 1967, when it was taken over by Blaauwhoed, an indication of the longevity of the *veem* companies due to its reputation and possession of activa at vital locations in the ports.

(4) Structure

Pakhuismeesteren stucked to its family firm structure throughout the period considered here. Unfortunately, again we are not informed about the internal functioning of the company's structure.

In first instance, the move to the waterfront of the *vemen* was accompanied by a very *decentralized* decision making structure. Both Vriesseveem and Blaauwhoedenveem partners created separate partnership firms for their new Rotterdam activities. Although membership partly overlapped, the Amsterdam and Rotterdam firms acted almost completely autonomous. Sensitivity to changes in the local environment was correspondingly high.

The choice for separate partnership firms corresponded to the age-old *veem* structure of partnership like organisations with a strong egalitarian flavour. Eventually, however, the move to the waterfront led to a consolidation of Amsterdam and Rotterdam interests into one limited company (Naamloze Vennootschap or N.V. in Dutch). Again, Blaauwhoedenveem was the first mover here. The joint operating agreement with the N.V. Handelskade led Blaauwhoedenveem to convert itself from a partnership firm into a limited liability company. This, however, was not an inevitable consequence of the move to the waterfront: the *f* 100,000 for the purchase of the shares of N.V. Handelskade could be raised by the partners themselves. However, at a meeting held on 15 October 1885 Bastide suggested to his co-partners that a public limited company had great long-term advantages compared with a partnership firm, in particular from a financial point of view. On 29 September 1886 the former members of the partnership firms founded the N.V. Blaauwhoedenveem with an issued share capital of 750,000 guilders. As with the conversion into a partnership firm in 1857, Blaauwhoedenveem played a leading role in the *veem* world. On 18

September 1890, the Amsterdam and Rotterdam partnerships involved incorporated their interests in the N.V. Vriesseveem. Here, too, there was no acute financial necessity for this.

For the members of the *vemen*, the changeover to a limited company represented a much greater break with the past than the formation of the partnership firms some decades earlier. The final result was a total split between ownership and management and the building of management hierarchy within the firm. This transformation did not occur without troubles. For instance, when the N.V. Blaauwhoedenveem was formed, four of the ten partners were appointed as directors. The other partners were left with nothing more than a position as proxy holders or as heads of a particular department of the warehouse company. Even in the days of the partnership firm, the managing partners of Blaauwhoedenveem had acted very independently and important proposals were only presented to the other partners in elaborated form, but the partners who were not included in the management nevertheless felt they had been demoted in 1886 and three of them openly rebelled against their former fellow partners that now were the managers of the firm in 1889.

This building of a management hierarchy can be considered a form of centralization, but informally decentralization continued to exist to a significant degree. As a result of the combination of the Amsterdam and Rotterdam firms into one limited company, decisions about large investments - which had to be financed from a joint fund - occurred much more frequently than before. Managers from both cities vied with each other for the best results inside the company, often opposed each other's plans for expansion - which were sometimes presented to the supervisory directors unexpectedly - and often did not communicate clearly with each other. Here the earlier history of the *vemen*, where Amsterdam and Rotterdam activities had been considered as separate ventures led by (partly) different partners, had a large influence on later developments. De Nederlandsche Veem was even more or less paralysed by the Amsterdam-Rotterdam fights for several decades. However, in the case of Blaauwhoedenveem and Vriesseveem, from 1917 merged in one company, this internal process of give and take did not hamper the responsiveness of the firm – it may even very well have stimulated it.

Finally, with the limited company-structure the already relative high flexibility concerning the possibility of merging companies when this was wanted from a strategic point of view was further increased. The merger between Blaauwhoedenveem and Vriesseveem in 1917 had to wait

on the (nearing) retirement date of some managing partners, but a consolidation was easier than in the case of family firms. In this respect, Pakhuismeesteren was somewhat less flexible.

(5) Financial policy

Despite the heavy investments in tankparks and new warehouses, the Pakhuismeesteren partners remained faithful to their conservative financial policy. In the reference years between 1860 and 1920 the aggregated credit on the partners' accounts at Pakhuismeesteren represented between 66% and 85% of the firm's total balance sheet value.⁴ By 1930 the share had fallen to 44%, but together with the reserves the partners' accounts still represented 80% of the firm's total balance sheet value. It should be noted that such a conservative financial policy was not uncommon for partnership firms. These balance sheet data only tell part of Pakhuismeesteren's financial history. The investments in new premises were sometimes financed by the partners acting as private investors and not by Pakhuismeesteren as such. Only (much) later on, these premises were transferred to the company. Pakhuismeesteren started to pay more interest than it received only from 1895. Until the 1930s the interest coverage was high or very high (10 or far more, except in 1922 when the ratio was still 5), which indicates that the use of foreign capital was negligible up to that time. Lower ratio's in the 1930s (5 or less, zero in 1935 and 1936) resulted from a combination of falling profits due to the worldwide depression and a sharp rise in interest paid from 1935 which was probably related to the heavy investments in a new tankstorage establishment at Pernis. All in all, Pakhuismeesteren's financial policy continued to be very conservative at least until the depression of the 1930s.

Until the formation of the limited company, like Pakhuismeesteren, the *veem* partners sometimes followed the policy of buying warehouses for their own account too. As a result of the use of modern equipment such as steam engines, and later all-electrical facilities, the buildings became increasingly expensive, while adequate occupancy of the premises was not always immediately ensured. The construction or purchase of large premises by the new limited companies was largely financed by debenture loans, share issues and mortgages. These were methods of financing which would have been unattainable for the old partnership firms. Still, not unlike the *vemen*'s traditional policy, most of Blaauwhoedenveem's profits were paid out each year to owners and managers. In general, in the 19th century Netherlands (and other European countries), public limited companies

⁴ This and other financial information presented in this paragraph is calculated from Vopak Archives, Balansbescheiden Pakhuismeesteren 1851-1939.

were seen as contracts between a group of owners in order to collectively gain profits (Van Zanden, 1997, 67). The formation of reserves was primarily meant to stabilize the payout of dividends. In this line with this general picture, Blaauwhoedenveem was rather generous to shareholders and directors. In aggregate, between 1886 and 1916, more than 90% of the net gains were paid out to shareholders and directors.⁵ For the years 1917-1930, the payout was 89%; still relatively high. Furthermore, compared to Pakhuismeesteren, Blaauwhoedenveem's interest coverage evolved on a much lower level (between 2 and 4 in the time-span 1895-1910). In this respect, its policy was not particularly financially conservative too, although the ratio rose significantly after 1910 and remained rather high until the depression of the 1930s (6 or more from 1911 to 1921, 3 to 6 between 1922 and 1929). During this latter period, Blaauwhoedenveem's financial policy was more conservative than the average Dutch public limited company. While the public limited companies on average ate into their reserves to continue paying dividends to shareholders in the first half of the 1930s, Blaauwhoed discontinued paying out dividends after 1930 and would only restart with this on a regular base after the Second World War.

3.4. Transformation and diversification: searching for the identity of Pakhoed (1945-2000)

(1) Position in the supply chain

Very soon after the Second World War, a feeling occurred that the traditional warehousing business had had its time. After Indonesia had become independent in 1949 a regular flow of tropical materials to the Netherlands began again, but imports remained far below the old pre-depression level. In particular Amsterdam was hit by this development and within Amsterdam, Blaauwhoedenveem-Vriesseveem (hereafter called Blaauwhoed, the name it took on in 1954), with its focus on typical staple products like tobacco and tea was the main victim. The decline in Blaauwhoed's warehouse work in Amsterdam was also attributed to more general alterations in the pattern of trade. More frequent sailings by liner shipping companies and several new fast and reliable communication techniques enabled industrial companies increasingly to import their raw materials without any intervention from the trading houses. Through the (partial) elimination of the

⁵ This and other financial information presented in this paragraph is calculated from Blaauwhoedenveem(-Vriesseveem), *Annual reports 1902-1939* (containing retrospective data of the period 1886-1901).

trade the warehouse companies acquired a different kind of principal. Whereas a trader would leave his large stocks lying for years after the arrival of a new harvest in order to sell them bit by bit, because of cost considerations the manufacturer importing goods directly – in relatively small amounts - was interested in keeping his stock of raw materials as small as possible. In itself, this did not necessarily damage the warehousing companies' turnover. But some industrial companies preferred to store their goods themselves if that was cheaper. This implied that the location of the *vemen* in the seaports became less a strategic asset than before. The elimination of the trade also adversely affected the warehouse companies' income from processing products. Sampling by the warehouse company, for example, only made sense for a trader who intended to resell his wares to someone else.

Paradoxically, in the sector where vertical integration of production, trade, transport and processing occurred in very early stage, the oil industry, there had remained ample room for third party warehousing in the ports (perhaps because these costs represented a tiny share of the oil companies' expenses). However, the cutting out of tradesmen was supposed to wipe away the *raison d'être* of the warehousing companies in the dry cargo sector. Nevertheless, in Rotterdam, the perspectives for the warehousing companies did not look so bleak here. That the traders lost terrain was disadvantageous, but the incoming flow of dry cargo suited for warehousing as such increased steadily since the Second World War to a peak level of ca. 8,5 million tons in 1984 (compared to a average of ca. 1,5 million tons between 1924 and 1938). Turnover in dry cargo business increased significantly at Pakhuismeesteren up to 1967 and Blaauwhoed's Rotterdam warehouse business expanded too, albeit much less strongly. Dominating the picture however was the dramatic, virtually uninterrupted explosion of mineral oil arrivals from a few million tons to 150 millions tons and more, which made Rotterdam the world's largest port since 1962.

Pakhuismeesteren continued to rely on its tank storage business which provided her an unique combination of a lucrative and stable operation. Year after year, an increase of oil arrivals in the port of Rotterdam made this an almost leisurely business. In addition, from the late 1940s, Pakhuismeesteren diversified from dry warehousing into adjacent fields of ship agency and stevedoring operations and, on a much smaller scale, Rhine shipping and road transport. It was not easy to conquer a significant position in the Rotterdam ship agency and stevedoring business, that was populated by firms with histories that went back to the nineteenth century or even earlier. In fact, Pakhuismeesteren was only postwar-newcomer that succeeded in this respect. It

did this by focussing on customers that were in a sense also newcomers, i.e. shipping companies from communist countries: Soviet Union, Eastern Germany and China (although the first major client in shipping agency was the Japanese firm NYK). Pakhuismeesteren obtained a monopoly in serving this specific group of customers which represented a well protected niche in the port of Rotterdam. Measured in tons, Pakhuismeesteren became the third largest Rotterdam break-bulk stevedoring firm in 1967, an impressive performance for a post-war newcomer in this field. In this way, Pakhuismeesteren succeeded to sustain a profitable operation in dry cargo business, which turnover increased significantly.

Blaauwhoed took a different course. Instead of broadening the base of warehousing, from 1954 it started experimenting in the real estate business, in Amsterdam to begin with. Superfluous warehouses were not sold or teared down, but rented to other companies that used them for (in general small scale) manufacturing or trading activities. In this way, Blaauwhoed capitalized on the intensification of industrialization in the post-war Netherlands. Blaauwhoed even went as far to take over several old *vemen*, just for acquiring their premises. The last 'victim' of this policy was Het Nederlandsche Veem that was acquired in 1967. Almost all the old *vemen* had now been absorbed by Blaauwhoed. In 1963, in cooperation with the Shell Pension Fund, one of the financially strongest partners anyone could wish for, Blaauwhoed began constructing or buying buildings itself as a project developer under the name Blauw-Fonds. From then on, the discussions about the real estate projects to be developed dominated the Blaauwhoed management meetings, while the income from the warehouse business became increasingly less important for the company as a whole. The real estate business proved to be successful; in the 1960s it became responsible for the bulk of Blaauwhoed profits. However, exploitation of port warehouses for real property purposes was a much more riskier business than warehousing, because the occupation of scarce space in the port area did not provide a competitive advantage here.

In 1967, in a climate of 'merger mania' in the economy in general and the Dutch seaports in particular, Pakhuismeesteren and Blaauwhoed merged into Pakhoed. Both firms were eager to avoid a potential ruinous competition in the ports that was looming at that moment. More specifically, Pakhuismeesteren considered a merger with Blaauwhoed as a next, major step in its diversification policy. In addition, via a merger with Blaauwhoed Pakhuismeesteren could gain a quotation at the stock market, which it increasingly needed to finance its expansion program.

From its side, Blaauwhoed was of course heavily interested in the stable and profitable tank storage operations, which would counterbalance Blaauwhoed's at that moment profitable but rather speculative real estate business.

The first ten years of existence of Pakhoed were characterized by consolidation and divestment in dry cargo warehousing in Rotterdam (1970) and eventually also in real estate business (1977/1985). In retrospect, one could say that Pakhoed's real estate business was doomed to fail. Unlike in warehousing, in real estate development there were no enduring relations with (large) customers to count on. More than ever, tank storage was the basis of the company. Pakhoed further expanded internationally in tankstorage, in particular after the first oil crisis of 1973. The United States and later the Far East were main new markets that Pakhoed entered.

Still, Pakhoed kept on searching for an extra 'pillar' next to tank storage, the dry cargo handling and transportation activities undertaken on a rather small scale and initially also real estate. The wish to spread risk was the major driving force behind this strategy of further diversification. At several times, Pakhoed thought seriously about entering the growing business of container handling in Rotterdam, for a long time the world largest port in this speciality, at a significant scale. However, again and again, the Pakhoed management considered the risk of large-scale container handling, in a technologically advanced way, as too high, compared to the familiar, both lucrative and stable, tank storage business. Unlike the oil sector, the container shipping business was constantly in turmoil, in particular because of changing alliances of deep-sea carriers that made the choice for a certain container terminal not only a matter of costs and service but also of shipowners' wheeling and dealing. In addition, the Dutch liner shipping companies (HAL/Incotrans and Rotterdamsche Lloyd/Nedlloyd) had a stake in the leading Rotterdam container stevedoring firm ECT, which – at least in the eyes of outsiders – guaranteed ECT the custom not only of the Dutch liner companies but also of their partners. In other words, Pakhoed could not rely on her familiar policy of forging long term bonds with specific customers here. Therefore, Pakhoed restricted its activities to participating in the second largest Rotterdam container stevedore, Unitcentre, from 1975 on. Unlike ECT, Unitcentre followed a low-cost, low-risk strategy and focussed on the 'captive' custom of the relatively small shipping lines from communist countries that containerised their trades later than the western shipping lines. After

ECT had taken over Unitcentre in 1993, Pakhoed withdrew from container handling completely in 1998.

Pakhoed diversified in other directions, with varying success. In 1983, Pakhoed took the opportunity to acquire Pandair. This air freight forwarding company represented a major diversification in the transportation business. In this way, Pakhoed capitalized on the trend towards integrated transport and distribution. However, only after four years, Pandair was sold off again. The acquisition of Furness, a relatively small conglomerate of stevedoring and other transportation firms as well as auto dealers, in 1990 increased Pakhoed's exposure to the at best marginally profitable (dry) transportation sector. In 1996 the remaining part of Furness was sold again too.

Much more successful was Pakhoed's move into distribution of chemicals, a sector in which tank storage played a central role, both by internal growth and acquisition. In the process of expanding internationally in the tank storage business, more and more chemicals were stored at the Pakhoed establishments. It also implied that Pakhoed became involved with chemical distribution. Major take-overs were Houston-based Robertson Distribution Systems (RDS) in 1976, the Dutch Broere and the British Tees Storage Company (50%) in 1988, the French Lambert Riviere in 1994, and, in particular, Univar in 1996. This latter acquisition made Pakhoed the largest chemical distribution firm in the world. Finally, however, Pakhoed – after its merger with Dutch tank storage firm Van Ommereen in 2000 called Vopak – disposed itself of chemical distribution in 2002; the activities were from then carried out by an independent firm Univar.

(2) Technology

Again, the flexibility of the warehousing companies' core technology proved higher than one might expect given its real estate nature. It was not uncommon for a warehousing company to venture into the adjacent field of stevedoring operations. Blaauwhoed had started to do this in 1938 in Rotterdam, with limited success. The much more large scale and successful diversification of Pakhuismeesteren into ship agency and, in particular, stevedoring was based on its port warehouses in Rotterdam. The diversification strategy was crowned by the building of a integrated warehousing and stevedoring establishment in Rotterdam in 1965, where ships could unload their cargo directly into the multi-level warehouse. The very successful transformation by Blauwhoed of obsolete warehouses into real estate objects is another example of the versatility

and flexibility of technology. Furthermore, Pakhoed's possession of tank parks and its specialized knowledge of tank storage operations enabled her to diversify into chemical distribution, although this also included the new element of trading activities. However, the relatively simple nature of its technology implied that a warehousing company like Pakhoed did not feel a strong urge to establish a research and development department. A move into container handling in the technologically advanced manner it was operated by leading terminal ECT in Rotterdam was considered by Pakhoed as too much a step in the dark.

(3) Culture

After the Second World War, Pakhoed and its predecessors recruited new top managers mainly from outside. In 1949, the Pakhuismeesteren partners invited not only one of their sons, but also someone to join their firm as a partner, H.J.E. van Beuningen, who had been an employee of the company only for three years. The new partner, a nephew of the famous Rotterdam 'harbour baron' D.G. van Beuningen, showed a strong affinity with port operations, in the particular for the dry cargo business he became responsible for. Some of the new post-war operations that did not prove to be profitable, in particular Rhine shipping, were nevertheless continued more or less for hobbyistic reasons. Van Beuningen and also the other 1949-entrant, R.A. de Monchy, gained a reputation for the freedom they gave lower managers for taking new initiatives.

Blaauwhoed was dominated after the war by someone who was in many respects Van Beuningen's opposite. In 1945, Blaauwhoed's management was joined by H.J.W. Brouwer, an academically trained economist. With a cool eye, he analysed the situation in Amsterdam, with its many empty warehouses, and he concluded that the traditional warehousing business would eventually die. Despite significant internal resistance, in particular from the Rotterdam managers, he transformed Blaauwhoed into essentially a real estate company.

Brouwer's perspective was a financial one. One could say that he gained the overhand after the merger in 1967. In 1970, Van Beuningen left Pakhoed's management, because he did not want to share the responsibility for the sell-off of the larger part of the dry cargo activities and the lay-offs that accompanied them. The CEO that succeeded Brouwer in 1975, G. Verhage, was a financial expert too, he had worked as external accountant for Pakhuismeesteren before. His tenure was short-lived, in 1977 he stepped back to the position of second man, in favour of H.

Crijns, an engineer. Crijns led Pakhoed between 1977 and 1992. In particular 1977 was a turbulent year, several ex-Pakhuismeesteren managers left the company because they disliked the course that was followed. Crijns was succeeded by N.J. Westdijk, who had been CEO of Furness until its acquisition by Pakhoed in 1990. One of the main reasons for the take-over of Furness was to acquire its managerial staff that was in short supply at Pakhoed. Originally a consultant, Westdijk had the image of being a technocrat, but he also shared Crijns' deep interest in Pakhoed's long history.

In the end, Pakhoed top-management could not cope with the 'foreign' activity of real estate development where there were no enduring relations with (large) customers to count on. On the other hand, its rather financially oriented, technocratic management style was not at odds with the traditional terminal culture of Pakhoed. Predominant on the terminals was a local focus. Several managers interviewed often described Pakhoed as a 'democratic' and even 'chaotic' company (Kamerbeek, 2000; Eikelboom, 2002). This persistent typical Pakhoed culture can explain why terminal based diversification in chemical distribution succeeded and the Pandair adventure in air freight transport did not. Although acquisitions played a major role here too, the diversification into chemical distribution was a more or less 'organic' growth of the existing tank storage activities. Culturally, chemical distribution lies somewhere in between Pakhoed traditional activities tank storage and dry cargo warehousing. Compared to oil storage, in chemical tank storage a larger variety in products, and thus handling and processing, prevails. The approach needed is less large scale and more (local) customer oriented – in the absence of scale effects, net margins tend to be lower too. Also 'new' for Pakhoed was that chemical distribution involved a trading in products. All in all, however, there was a rather good cultural fit between oil storage and chemical storage and distributions. Nevertheless, Vopak decided to get rid of chemical distribution in 2002. It felt it had to choose and to concentrate on the familiar oil storage business was a natural choice. Also the bad experiences with trading activities by Van Ommeren during its merger with trading company Ceteco (1987-1992) played a role in this decision.

The failure in air freight is much easier to explain from a historical perspective. An air freight forwarding company like Pandair was focussed on cargo flows, not on terminals; in other words, on networks instead of knots. The Pakhoed top management underestimated the importance of building a global network in the airfreight business with a respectable number of establishments, because it tended to think according to the dominant logic in tank storage business where

establishments on a few strategic locations sufficed. Still adhering to a conglomerate/holding philosophy, the Pakhoed management involved itself too little in Pandair's operations, which prevented it to gain substantial knowledge about the air freight business. All and all, during these experiments, and largely unconsciously, Pakhoed discovered its core cultural identity of a terminal company.

(4) Structure

Pakhuismeesteren had a rather decentralized structure after Second World War, with much autonomy for lower managers. This led to a stream of new initiatives (see above). The transformation into a limited company in 1956 made no difference in this respect.

At Blaauwhoed there was a tendency towards centralization after 1945. Blaauwhoed's Rotterdam management, supported by the much more favourable development of the work in that city's port, was not charmed with the real estate policy of the Amsterdam director, Brouwer. Blaauwhoed's change in focus to real estate exploitation was, in fact, hampered by the long-standing antagonism between the branches in Amsterdam and Rotterdam. From 1959 on, without success, Brouwer tried to sell off (part of the) Rotterdam warehousing and stevedoring activities. What the Amsterdam management was aiming at - and this it freely admitted - was to reduce the Rotterdam port interests and thus finally create '... a hierarchically clear structure ... according to which the business will be directed in broad lines from Amsterdam with a subordinated Rotterdam'. In the first half of 1962 Blaauwhoed carried out a change in structure which eliminated the opposition between Amsterdam and Rotterdam as an obstacle. Blaauwhoed became a holding company, registered in Amsterdam, while the warehouse, forwarding and stevedoring companies in Amsterdam and Rotterdam acquired the same status as the foreign subsidiaries. The Amsterdam and Rotterdam operating companies were given separate boards which came under the management of the holding company in Amsterdam in the hierarchical structure. In this way, the holding company management was also able to convert various warehouse premises into business accommodation in Rotterdam as well.

The combination of these rather different management structures into Pakhoed led to a rather chaotic situation from 1967. After a short period of centralization, more or less out of necessity, Pakhoed was given an 'open' holding structure. This was in line with the conglomerate philosophy prevailing in the 1970s. Following this philosophy, the three divisions, Paktank

(tankstorage), Paktrans (transport), and Blauwhoed/Polyzathe (real estate business), were all organized in the same manner concerning structure, procedures and financial control. However, there was a large difference in the nature of the routine-like storage and transport business on the one hand and the speculative real estate business on the other. Therefore, Crijns placed the real estate business outside the regular Pakhoed structure. This gave Blauwhoed/Polyzathe ample room for experimentation and speculation. Finally, this lack of control led to unprecedented losses in the late 1970s.

(5) Financial policy

In the post-war period, Pakhuismeesteren's expansion, first of all in tank storage, led it to infringe on its traditional conservative financial policy. The interest coverage was much lower than it had been before 1930 and evolved between 2 and 4 between 1946 and 1964.⁶ Nevertheless, Pakhuismeesteren could finance its large investments for a significant part with debt capital, without too many risks. As the arrivals of oil in Rotterdam exploded from the 1950s, Pakhuismeesteren's tankstorage business proved to be even more profitable than it had been before. After its conversion into a private limited company in 1956, Pakhuismeesteren paid out no more than approx. one third of its net gains to shareholders and directors (two categories that overlapped). In fact, on balance, there was no pay-out at all: the issued share capital in possession of the directors increased from 5 to 13 million guilders in 1966. After 1964, the interest coverage improved considerably to 12 in 1966. Still, in 1967 some concern arose in the management as to whether Pakhuismeesteren was not overstretching itself with a policy of uncontrolled growth. A merger with Blaauwhoed was a way to reach a more solid financial situation.

Blaauwhoed had – due to liquidity problems (Van de Laar, 1991, 208) - much more problems than Pakhuismeesteren with financing its rebuilding scheme. Nevertheless, its interest coverage was clearly higher than Pakhuismeesteren's one after the Second World War (6 or more between 1946 and 1961;⁷ in relation to the growing dominance of real estate development, Brouwer restructured Blaauwhoed into a holding company, which inhibits a meaningful comparison of financial data before and from 1962). Like other Dutch public limited companies, Blaauwhoed

⁶ This and other financial information in this paragraph is calculated from Vopak Archives, Accountants' reports on Pakhuismeesteren 1946-1966 (non-consolidated data).

⁷ This and other financial information presented in this paragraph is calculated from Blaauwhoedenveem-Vriesseveem/Blaauwhoed, *Annual reports 1946-1961* and Van Zanden (1997, p. 68).

retained a higher share of its net gains than during the 1920s (around 50% between 1946 and 1961). This reflected the change in the nature of large companies that had occurred in the meantime (Van Zanden, 1997, 68-72). Managers became more powerful vis-à-vis (outside) shareholders and they wanted to retain a larger share of net gains to invest in the long-term growth of the firm. In addition, fiscal measures by the Dutch government fostered retaining profits. Blaauwhoed seems to have been more conservative than average in this respect during the 1950s. Nevertheless, its leading manager Brouwer manifested himself as a financial ‘wizard’ from these years. He had an unparalleled ability to ‘sell’ the prospects of real estate business to investors.

Pakhoed’s policy after the 1967 merger has a mixed score on the degree of financial conservatism. According to the interest coverage, Pakhoed’s solvability was relative low from 1975 until the second half of the 1980s (between 1 and 3, against a general average of publicly quoted Dutch firms of 4 to 6).⁸ On the other hand, the payout was less than average (32% to 43% between 1967 and 1994; versus 38% to 58%).

4. Conclusion

The findings of our empirical study into longevity in the Dutch warehousing business are summarized in table 2 on the next page. The longevity of Pakhoed’s earliest predecessors, the *vemen*, is not hard to explain. They were protected by regulation by the Amsterdam local government that wished to facilitate a smooth operation of the city’s (international) trade. Nevertheless, when the protective shield was lifted early in the 19th century, the *vemen* survived. The **position in the supply chain** of Pakhoed and its predecessors (hereafter indicated as ‘Pakhoed’) has been rather strong from this time. The location in international centres of trade and transport was a vital asset that – given the scarceness of space in the seaport – could be monopolized by a restricted set of companies, implied that ‘Pakhoed’ and their customers were forced to deal with each other intensively. As a consequence, the focus on enduring relations with certain customers was characteristic for ‘Pakhoed’. This strong dependence of certain

⁸ This and other financial information presented in this paragraph is calculated from Pakhoed, *Annual reports 1967-1994* and CBS, *Statistiek van balans en resultaten beurs n.v.'s 1975-1994*.

Table 2 Summary of empirical findings

	1	2	3	4	5
period	position	Technology	culture	structure	conservative financial policy
1600-1815	protected	very flexible	strong identity, subservient, reliable	Both egalitarian and hierarchical	low/high
1815-1860	strong	less flexible due to hiring/buying warehouses, still flexible	open to new activities and managers, strong reputation	hierarchical (PHM) both egalitarian and hierarchical (vemen)	high (PHM) low/high (vemen)
1860-1940	strong	less flexible due to larger/specialized warehouses, still flexible	open to new activities and managers	decentralization (Amsterdam-Rotterdam) followed by centralization (vemen)	from high to normal (PHM) from low to normal (Blaauwhoed)
1945-2000	weaker	still flexible	open to new activities and managers, terminal culture	decentralized (PHM), centralization (Blaauwhoed), decentralized (Pakhoed)	lower (PHM) high (Blaauwhoed) low/high (Pakhoed)

Note: PHM = Pakhuismeesteren, Blaauwhoed refers to Blaauwhoedenveem, Blaauwhoedenveem-Vriesseveem and Blaauwhoed.

customers triggered 'Pakhoed' to develop a high absorptive capacity. This is not to say that its behaviour was completely reactive; the several transformations and diversifications were the result of a more or less conscious strategy. Rather surprisingly, changes in the size of the customers and the level of concentration in their business was often unimportant for the longevity of 'Pakhoed'.

The example of the warehouse companies further shows that an apparently fixed **technology** (i.e. warehouses) can prove to be **rather versatile and flexible**. The relative simple nature of its technology however did not stimulate research and development activities of 'Pakhoed', which restricted its scope of feasible paths of diversification and experimentation.

The 'Pakhoed' **culture** can be characterized as locally oriented and 'open'. The local orientation is inherent to the nature of warehouse work. This cultural element was largely responsible for the fact that post-war diversification was only successful when the new activity was close to the traditional field of warehousing (including tank storage). The openness of 'Pakhoed's culture was partly the result of its **structure**, in particular concerning the possibility of recruitment of management from outside. This openness contributed to the high absorptive capacity of 'Pakhoed'. In addition, in the case of the *vemen* the warehousing culture also contained an important element of subservience, a legacy of the age of the guilds, which also was conducive to a high responsiveness to changing customers' need. The characteristic both egalitarian and hierarchical structure of the *vemen* was also a legacy of pre-industrial times. This partly very specific structure was relatively rigid on the one hand, but permitted an easy influx of newcomers on the other. As a result of this traditional structure, at the end of the nineteenth century, new activities in Rotterdam were undertaken in a decentralized way, which helped the responsiveness to local environmental changes.

For several centuries, the **financial policy** was related to the rather inert structure of 'Pakhoed' too. The *vemen* adhered to a structure that did not enable capital formation on a large scale for a long time, but on the other hand – given the unlimited liability of the members – restricted the financial risks of the company itself considerably. Like many other family firms, Pakhuismeesteren followed a clearly conservative financial policy until the 1930s. In the twentieth century, the financial policy came more the subject of conscious strategic choice. Our conclusion is that a conservative financial policy was not decisive for survival; 'Pakhoed' could afford itself to take serious financial risks for a relative long period of time.

What are the possible implications of these insights for the longevity of service firms as compared to manufacturing companies? A vital a priori factor is that the operation of services is by definition more tied to a certain location than industrial production (because production and consumption of services take place simultaneously). This simple fact has several important potential consequences. Firstly, it enhances the chance that firms possess certain strategic assets in the shape of sites at a unique location and thus a strong position in the supply chain. Secondly, localized operations are likely to result in relatively decentralized and thus rather 'open' structures. Thirdly, decentralized operations can foster a culture tolerant to innovation. More in general, given the fact that in at least some branches of the service sector suppliers are in rather dependent position towards their main customers, one might expect a relative high absorptive capacity here that enhances longevity. Furthermore, a flexible technology seems more peculiar to the service industry than to manufacturing too, although here differences between branches in the service sector should caution us not to draw too hasty conclusions. The warehouses were a more flexible technology than they appear at first sight. At the same time, however, the possession of real property gave the warehousing companies a stronger identity of permanence than service companies that are predominantly dependent on intangible assets, e.g. trading companies and firms operating in the financial sector. It is tempting to conclude that the warehousing companies possessed the best of both worlds in this respect. Finally, the degree of financial conservatism is hard to relate to innate characteristics of the service industry, in particular in the case of a service industry like warehousing where the level of investments in psychical assets resembles the situation in manufacturing industries.

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