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### Old firms in the Netherlands

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## **2 OLD FIRMS: A PRACTICAL DEFINITION AND A CURRENT STATE OF AFFAIRS**

In a research project focussing on old firms, one cannot avoid touching on the ongoing debate on defining firms. But, besides this, the question, as to what is ‘old’ in the context of the firm is also very important. In the previous chapter, this problem was briefly introduced. Chapter 2 will begin with the existing discourse on defining firms and pays particular attention to the age of firms. Research in the field of firm demography is primarily interested in counting and describing firms, in order to broaden the knowledge of the regional-economic dynamics of firms. Counting the number of start-ups, closures, relocations, and here survivors, is the basis of the analyses concerning these topics. A good clear definition of the object of study is therefore of paramount importance. Unfortunately, firms tend to be hard to define. This is not an exclusive problem for firm demography. On the contrary, the firm has been the object of study in a broad range of research fields. Among others, economists, psychologists, sociologists, and geographers have an interest in this cornerstone actor of the economy. However, this multidisciplinary discourse has not led to a widely supported and useable definition of “the firm”. Several views will be discussed, ending in a practical definition for use in this particular investigation, with special attention given to the justification of the decisions made. To date, the specific group of “old firms” has been largely ignored in previous research for several reasons; the most important being a lack of sufficient data. Following the definition, this chapter will describe the search for applicable data for old firms and will end with an attempt to identify the population of old firms in the Netherlands.

### **2.1 Introduction**

Penrose (1959, pp.10) suggests, “each analyst is free to choose any characteristics of firms that he is interested in, to define firms in terms of those characteristics, and to proceed thereafter to call the construction so defined a ‘firm’.” It is certainly true that various research fields are interested in firms in different ways. For example, in the study of geographical clusters, firms are usually defined in relation to networks of participation; whereas sociological studies see firms as platforms for interpersonal contacts, learning and adaptation. The definition of the firm used in the two approaches differs greatly. Penrose’s approach seems very appealing, however, at the same time, it is unnecessarily lenient. In theory, some components can be distinguished that all firms share; regardless of the scientific angle one wants to take. This assumption comes from the common-sense interpretations of the firm, which are not an issue for debate at all. For ordinary people, the construction of the

firm is perfectly clear and needs no further explanation. Nevertheless, the theoretical debate on firms will be discussed in Section 2.2.1

Following the geographical roots of firm demography, attention has to be paid to the distinction between firms and establishments. In geography, establishments are usually regarded as the relevant actors. From a more economic point of view, firms are more relevant being the creator of employment and technical developments. However, in practice, most firms have only one establishment, so for many firms the definition of firm and establishment is one and the same (Kloek, 2002). This distinction is most clear within the definitions of statistical agents, as will be in discussed Section 2.2.2

Verheul et al. (2001) find very little consensus in the field of entrepreneurship. One of the problems Verheul et al. look at is the definition of the firm. In economics, the relationship between the local conditions and the success of a firm has not been investigated in much detail. It has been in economic geography, however, here success of a firm is not only assessed in terms of profit, but also in terms of firm size (measured in number of employees) or the length of the firm's existence (Van Wissen, 2002). Is getting very old a sign of success for a firm? It may be that a firm itself is old, but that it has been rejuvenated from the inside. The question remains as to what is old in the context of the firm. The biological metaphor is not so applicable here: according to Carroll (1988) there is no specific reason why firms cannot live forever. Firms have numerous roles in society and this is reflected in both research and policy, as Penrose (1959) has made clear. Firms are sometimes seen (and measured) as economic actors, but for other purposes firms are transformed into taxpayers or employment generators. In this chapter attention will be given to age as a specific characteristic of firms, from the firm-demographic context, in Section 2.3.

In Section 2.4 the search for data and the realisation of a dataset to be used in this particular research are described. Section 2.5 elaborates on the outcomes of the dataset, and describes how the population of old firms is distributed over the Netherlands. Furthermore, in this section, the outcomes are compared with the total firm population and attention is given to the sectoral distribution of the old firms.

## **2.2 The firm defined; theoretically and statistically**

In general, the set of existing definitions of the firm, can be split into two groups. In the first group, firms are defined by their interactions with the environment (market) and, in the second group, the firm itself is seen as the unit of analysis and this creates a necessity for distinct boundaries (Brouwer and Koster, 2002). The first group of definitions arises from the neo-classical and behavioural view point (Pred, 1969) and the second group of definitions arose at the end of the 1960s. In 1965, Stichcombe published an article about entries and exits of organisations and the influence of this on the social environment. This was followed by research by

Hannan and Freeman who redeveloped this vision towards the macrolevel, and called this organisational ecology (both quoted in Van Wissen, 2002). Hannan and Freeman (1989) introduced new theoretical insights from organisational ecology with a focus on boundaries between organisation (firm) and market. From their theory of organisational ecology<sup>i</sup>, which is the foundation of the demography of firms, emerged the necessity for viewing the firm as a unit of analysis. Here, the firm itself is seen as a measurable unit, and this does cause some practical analysis problems. One needs a clear definition of the firm in order to measure it. This requires making distinct boundaries between the firm and the market, and stepping back from the view that the firm can only be identified by its actions, especially by its interaction with its environment (Maskell, 2001).

### **2.2.1 Theoretical considerations**

First, the neo-classical, behavioural, institutional, and evolutionary views of the firm will be discussed in brief, followed by the firm in the firm-demographic context. This approach is chosen because, over the course of time, new names and new views of the firm have emerged, but all of these look back to either the neo-classical approach or the behavioural approach to the firm. The section ends with a theoretical definition of the firm as used in this research.

#### *Neo-classical approach*

In the neo-classical view, the firm is defined by its production function. A fixed amount of input leads, by a set of rules, to a fixed amount of output. The price of the output is determined by the interaction between supply and demand and is known to everybody. What happens inside the firm is unimportant; the firm is seen as a black box. The production-function as such defines the firm (Taylor and Asheim, 2001). Coase (1937) refined the neo-classical view of the firm by presenting an alternative. Coase assumed that, for every commodity in the economy, the supply side and the demand side would engage in a contract. The commodity will then be delivered at a fixed price. Negotiation over the price results in (transaction) costs. Coase claims that certain transactions are less expensive inside the firm than in the market. This causes the price-differences between firms and explains the existence of competition between firms.

Cohen (1979) summarises the neo-classical definitions of the firm discussed above as follows. The neo-classical 'firm' has two essential characteristics: 1) the firm has some sort of productive activity, and 2) the firm is involved in some sort of contractual arrangement. Hart (1989) adds to this that the neo-classical firm is a legal entity with a production set (a set of feasible production plans) from which a manager, acting rationally with full information, chooses the set most likely to maximise profits or the present value of the firm. Also in a neo-classical economic geographical view, the firm is treated as a black box which responds to its

environment in a completely rational way. Again, the firm is defined by its production function (Taylor and Asheim, 2001).

#### *Behavioural approach*

In the neo-classical approach it is assumed that the actors, i.e. the firms, have complete knowledge and full access to all information. In 1955, Simon introduced the notion of 'bounded rationality' which means that even if actors (e.g. entrepreneurs, managers) have full and complete information, which by itself is almost impossible, the actors would never be able to process all this information. According to Simon (1955), actors (firms, people) make decisions based on the use of incomplete information in a subjective manner. This approach signalled the start of behaviouralism, which puts the uniqueness of the actor at the centre. Casson (1997) defines the firm, in this tradition, as a structure designed to harmonise the decision-making efforts of a group of people who are focussed on a single set of related issues. Here, the actors inside the firm determine the 'behaviour' of the firm in the market. The actors have incomplete information and act accordingly. This causes sub-optimal decisions by the firm in the market (Pred, 1969). Preceding Pred's insights, Cyert and March (1963) gave the following definition: a firm is a site of decision-making involving conflict, uncertainty, problem-stimulating search, learning, and adaptation over time. Cyert and March argue that as long as the environment of the firm is unstable, firm behaviour must be a process of short-term adaptive reactions by the actors.

This short introduction to both the neo-classical and the behavioural views of the firm demonstrates that, in these traditions, the firm is identified by its interaction with its environment. In the neo-classical theory the firm itself is seen as a black box, with all the involved actors acting completely rationally and with perfect knowledge. In doing so, the neo-classical theory completely defines the firm by its production function. The behavioural view of the firm introduces the notion of bounded rationality as a counterpoint to perfect knowledge, and addresses issues of information flows and 'knowledge' in the shaping of enterprise-environment interactions (Taylor and Asheim, 2001).

#### *Institutional approach*

Institutional theory makes a distinction between the technical and institutional environments of organizations and firms. On one side, is the technical environment in which the firm produces a product or service that is exchanged in a market such that they are rewarded for effective and efficient performance. On the other hand, the institutional environment is characterised by the elaboration of rules and requirements to which individual firms must conform in order to receive legitimacy and support (Oinas, 1995). Orrù et al. (1992) define institutionalism as "a theoretical perspective that focuses on organisational conformity with social rules and rituals rather than with the technically efficient processing of inputs and outputs. It is a perspective

concerned more with legitimacy than efficiency” (pp.361). Or, as Scott (1992) describes it, institutionalists recognize “the rules and belief systems as well as the relational networks that arise in the broader societal context” (pp.14).

In the institutional approach, the assumption is that economic activity is socially and institutionally situated: it is shaped by society’s cultural institutions and value systems rather than by firm behaviour (Thrift and Olds, 1996; see also the ‘geography of enterprises’ by Krumme, 1969 and the ‘industrial district literature’ by Pike et al., 1990; Brusco and Paba, 1997; Becattini, 1990 and 2002, and Amin, 2000). Economic activities are ‘embedded’ in ongoing social institutions or networks (Granovetter, 1985 and 1993; Storper and Salais, 1997). A firm’s location behaviour is the result of its investment strategies. It is the outcome of a firm’s negotiations with suppliers, government, labour unions and other institutions about prices, wages, taxes, subsidies, infrastructure, and other key factors in the production process of the firm. The institutional theory is more appropriate for large firms that have more significant negotiating power and are able to exert a substantial influence upon the environment (Pellenbarg et al, 2002). In the institutional theory, ‘external’ or ‘institutional’ factors (e.g. spatial adjustments such as expansion, merger, acquisition and take-over, but also trust, reciprocity, co-operation and convention) play a key role at all levels in the economy: from the structure and functions of the firm, through the operation of markets, to the form of state intervention (see, among others, Hayter, 1996 and Martin, 2000).

#### *Evolutionary Approach*

In the evolutionary perspective, in a population of firms in which all firms have identical behaviour, competition cannot be generated and, without competition there can be no selection. An evolutionary view of the firm provides an explanation for the inherent variety of firms and their actions (Peneder, 2001). Penrose already observed this in 1959 with the following words: “exactly the same resource when used for different purposes or in different ways and in combination with different types or amounts of other resources provides a different set of services ... it is largely in this distinction that we find the source of uniqueness of each individual firm” (pp.25). The evolutionary view of the firm embraces bounded rationality, routines, sub-optimality by path-dependency, irreversibility and disequilibria (Boschma et al., 2002).

An evolutionary approach to economics is grounded on an explicit dynamic account of the interaction between mechanisms of variation and mechanisms of selection. Nelson and Winter (1982) underline two dimensions of the routines. On one hand, the firms’ remember by doing - the cognitive dimension that considers that routines encompass the firm’s knowledge basis and constitute the firm’s memory. On the other hand, are the attempts by a firm to change its routines that can result in a conflict that is destructive to the firm, the so-called motivational dimension associated with the control of intraorganizational conflict, where the

routines are 'truces' amongst conflicts (pp. 99 and 143). In this perspective, routines can be seen as a way to remember by doing and knowing how to do things. The behaviour of firms can be explained by the routines they employ. Knowledge of the routines is at the heart of understanding firm behaviour. Modelling the firm means modelling the routines and how they change over time (Nelson and Winter, 1982). These specific competencies of the firm determine, to a large extent, future success (Boschma et al., 2002).

Cohendet and Llerena (2002) define a firm in this context as follows: "at each moment in time, a firm can be characterized by a set of productive knowledge which has been developed through a learning process and is implemented through the set of currently applied routines. Processes of selection and variation within the firms have the function to create, maintain, replicate, and modify a body of distributed knowledge, which characterizes the firm, through a set of competences that the firm encompasses" (pp.12). Cohendet and Llerena argue that this is precisely why firms differ: they rely on different routines and specific competences.

In both the institutional and the evolutionary approaches the firm is again defined by its interactions with its environment. However, in the evolutionary context, the selection of the firm by the environment depends heavily on the routines the firm develops internally. Firms with routines that best fit the environment will survive and others do not.

### *Demography of firms*

Now that in the field of economic geography the demography of firms is also included, there is need for identifiable, measurable and 'countable' firms. There is a need for comprehensible boundaries between firms, and between firm and market. In other words, a clear concept of what constitutes a firm and how it can be recognised even under changing circumstances, is required.

Hannan and Freeman (1989) and Chandler (1992) support this focus on boundaries. According to Chandler, the firm is a unit of analysis in which the special nature of the facilities and skills are more significant than bounded rationality and opportunism in the shaping of the decisions as to internalising transactions and, therefore, in determining the boundaries between firm and market. In the book 'The demography of corporations and industries' by Carroll and Hannan (2000) again the lack of a clear measurable definition of the firm causes problems between the theoretical constructions they develop and the practical implications in this field of research. The main problem here is the lack of consensus between the measured data provided by government institutions and the specific data requirements of the theory. Also Maskell (2001) advocates the need for a clear definition of the firm in economic geography. His argument is as follows: "Economic geography is characterised by the lack of a clear conception and understanding of ... the factor conditioning its (the firm) size and boundaries, and the exogenous mechanisms that influence its mode and external interaction" (pp.340). In other words,

Maskell is a supporter of a clear definition of the firm, how it behaves and performs the way it does, what roles it performs in the economy and why it exists. Although he advocates for a distinct definition of the firm, he does not ask any questions about operationalising the concept of the firm as a unit of analysis. Maskell provides a good start for a clear definition, but does not give any handles for creating countable units of firms. Boundaries are of prime interest since they form the basis for counting firms. In firm demography, economic productivity should be included in the definition because the emphasis in this field lies on the economic development of regions and the role of firms in this (Van Wissen, 2002). Counting firms is not an end in itself.

It is not easy to establish a link between theoretical thoughts on the firm and the more practically orientated lines of reasoning, aimed at counting firms. This is mainly due to a fundamental difference in point of departure. Most theoretical contributions about the firm are specifically interested in the effects that firms have on the environment and vice versa. Firms are defined as open entities in this type of research. Within the fields of organisational ecology and firm demography, as well as in statistical approaches, firms are supposed to have clear-cut borders. This calls for a definition that regards the firm as a closed entity. Both views have their own merits, but seem to contradict each other.

#### *Boundaries and ownership*

Boundaries between firms and the market become important when one wants to count firms (Cohen, 1979). It is essential to know where one firm ends, and the next one begins. For most organisations, borders are quite easy to distinguish as the production, management, and owner are all located in the same place, within the same establishment. Without much difficulty a small firm can be considered as one measurable unit. Difficulties arise when larger (clustered) firms are studied. Such firms engage in multiple activities, either horizontally or vertically integrated, and at more than one location (Colledge, 1995) and the 'boundaries' between firms thus become much more fuzzy. For example, some business ventures of companies can be independent to a large extent, but lack the right to disband. Whether such a venture can be seen as an independent and countable firm is open to discussion. Eurostat (2002, pp.12.8) uses a definition for the firm which recognises these autonomy problems: "[A firm is an] organisation unit producing goods or services which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources." Following this definition, a business venture, located outside the power of control of the mother organisation except for the right of disbandment, is a firm in its own right.

Studying ownership relationships can be a very useful way of creating boundaries between firms when looking from a legal context. Firms, because they are economic entities, necessarily entail a legal definition by which one can sort out



claims to cash flows and ownership (Kogut and Zander, 1996). Minkler (1988, pp.5) discerns three kinds of ownership:

USUS – the right of use of an asset

FRUCTUS – the right to benefit from an asset

ABUSUS – the right to dispose of an asset

Translated to firms, full ownership includes all three rights. Business ventures as described above lack the right of ABUSUS. The same holds true for franchise establishments, to which Minkler applied the framework. The mother company and the franchisee are engaged in a ‘usufruct’. Units that are based on a usufruct relationship can be regarded a firm while they independently engage in economic action in the relevant markets. Firms are seen as economically independent when two out of the three ownership rights apply to the business unit. This is in line with the definition used by the Dutch Bureau of Statistics (CBS, 2000, pp.22): “A business unit is the actual actor in the production process. It is characterized by autonomy, descriptability, and external orientation”. This definition also puts to one side so-called empty firms such as holdings, for these do not engage in economic action. From this section, it can be seen that in the field of demography of firms, two notions are important when defining firms. First, a firm needs to be economically active, since without this productivity the firm has no environmental and market impact. Second, a firm needs to be in control of its own actions, and for this a sense of power and ownership is important in defining firms.

### **2.2.2 Statistical agencies**

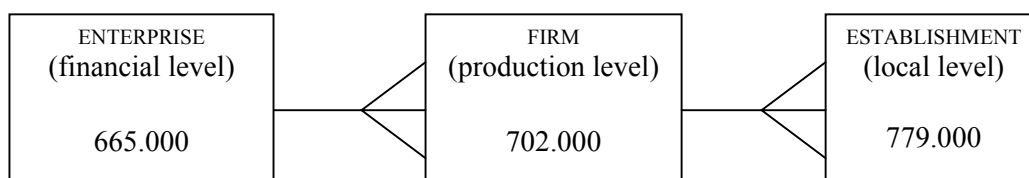
Statistical agencies such as Chambers of Commerce (CoC, Dutch equivalent KvK) are involved in discussions about counting firms and their boundaries for a more practical purpose. It therefore makes sense to see how firms are handled in databases such as the business register and official economic accounts. Statistical offices provide interesting literature on how to define a firm from a practical point of view. This, however, does not mean that a clear-cut definition exists in this area. Several agencies come up with different answers to the key question: what is a firm? Or from the statistical viewpoint, which business units should be counted as a firm?

An important usage of firm statistics is in the monitoring of legislation effects and, because of this, the development of statistical measurements usually follows policy. In firm statistics, development is preceded by a demand expressed in the policy applied to firms and the scientific current of organisational ecology. The Dutch Statistical Office (CBS), for example, started to publish data on firm formation and disbandment from 1993 onwards in the General Business Register (ABR). The time gap between the demand for and the supply of relevant data

partly explains the difficulties encountered by pioneer ecologists in obtaining data on firm demography (Hannan and Freeman, 1989) as discussed earlier.

Firms have numerous roles in society, and this is reflected in databases and in the definitions used. CBS (2000) for example considers the firm as both an economic unit, and an administrative or legal one. Colledge (1995) even distinguishes further operating levels of the firm: legal, administrative, statistical and organisational units. Before setting up a database, the unit of investigation has to be established. This decision has repercussions for studies that later use the data. Rosa (1998), for example, based his research on a database designed for limited companies. As a result, companies with other legal constitutions were not included. This is an example of how researchers are commonly bounded by the provided information. Therefore, it is important to determine the goals of the available databases before using any of them in research. Business life consists of firms, branch offices, holdings, shops and factories. In a statistical overview all need to be included but not double counted. In most cases it is quite clear, for example, a self-employed owner of one shop is automatically counted only once. However, how would one code a large enterprise with several establishments and multiple activities? The CBS uses three separate levels to describe business life; the financial level (the enterprise), the production level (firm unit) and the local level (the establishment). In most cases these levels coincide. The firm is the unit that independently decides on the daily activities and production. A firm should be externally orientated, that is it delivers services and goods to third parties. When a unit is part of a larger enterprise, it should not solely deliver its services within the larger enterprise. Every firm has at least one location from where it coordinates its activities. This hierarchy of institutionalisation is illustrated in Figure 2.1. The figure makes clear that one enterprise can consist of several firms (business ventures). Firms, similarly, can include more than one establishment. Most enterprises, however, are a single firm unit and also most firm units have only one establishment (Kloek, 2002). The number of units on each level in the Netherlands in 2001 is also shown in Figure 2.1.

Figure 2.1: Organization of businesses by the Dutch Bureau of Statistics



Source: Kloek (2002)

In the Netherlands, at present, there are three major sources of firm registration, which serve three different purposes. Each database is constructed in a way to achieve certain important goals, so significant differences between the three

different datasets can be found. The three major databases are the general business register (ABR) from the Dutch Bureau of Statistics (CBS) since 1993, the business register of the Chambers of Commerce (KvK) since 1920 and the LISA register (landelijk informatie systeem arbeidsorganisaties - national information system on labour organizations) since 1996. The business register of the KvK is intended to ensure legal security in trade; an obligation to register on the business register exists not only for firms, establishments, but also for associations, foundations and any other corporate bodies, which are not within the 'normal' definition of a firm. The ABR, however, is a register mainly intended to be a framework for random sampling. LISA was started in relation to the implementation of social security laws and has the prime objective of measuring employment in firms. Given this definition, the LISA database of establishments more closely resembles the ABR data rather than the KvK figures. The way an establishment is shown in the ABR is very similar to the LISA definition. The basic unit of analysis within the ABR is the firm, and if a firm is multi-locational, little about the separate establishments is known. Both the LISA and CBS sources are, nevertheless, in some way dependant upon the business register of the KvK, since both sources use the mutation balance of the KvK business register as their primary source in keeping their files up to date. However, they apply their own supplementary rules to indicate whether an object is a firm, an establishment or a combination of both (Van Wissen, 2003).

According to the Dutch Statistical Bureau (2000) the identity of a firm is defined in the following way, the identity of a firm is included in the unique combination of certain factors. These may include economic activity, land, labour, capital (goods), entrepreneurship, goodwill, know-how or customers. How important these factors are in any concrete situation depends upon the firm's sector. In some cases one factor can be decisive, in other cases the same factor can be of little importance. As a general indication, the following statements can be taken as a rule of thumb: 1) In the industrial sector the factor 'machinery' will play an important role, alongside that part of the factor 'labour' that holds specific production knowledge. 2) In retailing, mechanics and the hotel and catering industry, the most important factor will be the 'clientele', and with this the 'location' as an important factor of identity; and, 3) in services, the factors 'labour' and the 'qualifications of the owner-entrepreneur' of the firm will be decisive (CBS, 2000).

### **2.2.3 Definition of the firm**

Firms need to be based around a production process and this concept should be included when describing it. Firms are regarded as actors in an economic process and in order to have any influence they need to produce something. The basis for this argument lies in the neo-classical theory of the firm, which defines a firm merely by its production function. Although since changed and elaborated upon, this condition still stands and is also applicable to firm demography. From the

behavioural framework, the second indication can be drawn which considers the actions of a firm. Behavioural theory states that actions are subjective or illogical. This is an important view for studies interested in the influence of the firm on the economic environment. However, this notion also has its merits in defining the firm in a more narrow viewpoint. Taking actions is all about power and control. It is therefore conceivable that the freedom in decision-making (i.e. autonomy) is a good indicator with which to describe firms. Finally, the level of interest is of importance. The economic impact of businesses is most notable at the firm level. At this level, decisions about employment, investments, and other economic activities are made. The establishment level is not insignificant, but since most firms are single site establishments these levels usually coincide.

From the sections above, some possible variables for use in defining firms are easy to distinguish: firms all have a goal of profit or at least survival, firms are based around one or more production processes, and all firms have some kind of legal form. These concepts form the basis for a constructive view of the firm. Such an approach explicitly regards the firm as the unit of analysis, which is appropriate for this research. These aspects form the components of a definition of the firm, which can be used for counting firms and provides handles for identifying business units as a firm. The following definition of the firm is proposed as a start for identifying a practical database. Combining the three thoughts that were noted before, to which a firm in theory needs to answer: economic activity, ownership and level of influence, the following definition is formulated: *a firm is a trading business unit, based around one or more production processes, with the right to use and benefit from its production factors* (Brouwer and Koster, 2002).

### **2.3 Old in the context of the firm**

One of the difficulties in this particular research, is the definition of 'old' in the context of a firm. When is a firm old? Is it possible to simply characterise a firm on the basis of age in years, or can this only be done in relationship to the age of various attributes (name, legal status, product, number of employees, organisation or establishment) of the firm?

#### **2.3.1 Age as a measuring instrument**

The definition of firm's survival can be viewed in terms of the survival of the fittest. Firm age is a measure of the progression of time between two existential events: birth and death - age and ageing are therefore extremely important in firm demography (Van Wissen, 2002). Although firms may pass through a life cycle, the progression is not driven by biological decay (Penrose, 1952). Therefore, the meaning of age is different from that in human populations. Studies in firm demography focus on two possible effects of ageing on firm performance: the

survival probability and the growth and size effect. Firms learn from their behaviour over time. Mature and older firms are therefore better equipped than young firms, who still have to learn how to behave. To define the firm just by age in years can be problematic because no attention is then given to the current stage of development of a firm as already noted in Chapter 1. The product life cycle, the firm life cycle and the personal cycle of the entrepreneur are all different, but at the same time take place within the same entity: the firm. For this reason, these cycles are not the most useful tool in investigating old firms.

In the present research, the following statement is taken as true: firms have an indefinite life. According to Casson (1997), "The unlimited life of the firm allows its contractual rights and obligations to survive the death of its owner and so permits the structure to be perpetuated by his heirs or its trustees. A firm may be defined as a specialised decision-making unit, whose function is to improve co-ordinating by structuring information flow, and which is normally endowed with legal privileges, including indefinite life" (pp.80). Carroll and Hannan (2000) who speak of the potential immortality of formal organisations agree with this. A firm's life will only be ended if the firm is involved either in a merger, joint venture or a bankruptcy or when the entrepreneur decides to stop the business (Van Empel and Ritsema, 1995; Penrose, 1959). The analogy with human demography is precisely here, in terms of the potential immortality of an organization, not correct. Carroll and Hannan (2000) find this one of the main differences between social organisations and biological organisms, alongside the greater variety of types, the lack of clear parentage, the absence of genetic transmission, the partly decomposable structure of formal organizations, the greater heterogeneity and the ability of organizations to transform themselves. This potential immortality of firms, even though most corporations do die very quickly, is also a reason why the firm life cycle could be inapplicable, since the cycle in itself assumes not only a beginning but also an end (Penrose, 1952). For these reasons, the use of cycles in defining the age of the firm are best avoided, but instead the age of long-lived firms will be investigated in years since founding.

### **2.3.2 A practical definition of old firms**

In Section 2.1.2, it was noted that the CBS defines firms using a concept of identity. The firms' identity, according to the CBS, is formed by the unique combination of several, largely production, factors. These include economic activity, land, labour, capital (goods), entrepreneurship, goodwill, know-how, and customers. The importance of any of these factors depends on the branch the firm is working in (Kloek, 2002). According to the CBS, a firm does not change when any of the following occurs: a joint venture or separation, takeover, name changes, legal changes, ownership changes, gradual activity change or relocation within the same market. The firm only has to register as a new entry if any of these changes

coincides with a drastic change in the activity or production process, or creates a new market, or when a firm has a change of structure due to a joint venture or takeover being registered as a new entry (Kloek, 2002). But even just to recognize the firm's identity, the firm needs to be constituted using the three concepts described in Section 2.2.3, or follow the given definition 'a firm is a trading business unit, based around one or more production processes, with the right to use and benefit from its production factors' (Brouwer and Koster, 2002). When looking at long-lived firms from this view, these three issues need to be determined over a long period of time.

Penrose (1959) describes the difficulty in determining the boundaries of a particular firm of any given time; it is also sometimes difficult to trace the growth of a firm and to determine whether a succession of legally different firms should be treated as events in history within a single firm. "In practice the name of a firm may change, its managing personnel and its owners may change, its geographical location may change, its legal form may change and still in the ordinary course of events we would consider it to be the same firm and could write the story of its 'life'" (pp.22-23). The identity of the firm can be maintained through many kinds of changes, but it cannot survive the dispersal of its assets and personnel, nor its complete absorption in an entirely different administrative framework. A very successful firm may find it more profitable to merge with another firm, and thus lose its identity, than to continue independently. When an acquiring firm absorbs another other firm in its own administrative framework, the acquiring firm maintains its own identity. Alternatively, the merger may be classed as a new firm if the change in administrative structure of both firms is so extensive that it seems more appropriate to do so. In both cases firms have disappeared without failing. In one case a new firm is created, in the other not. Survival in this sense is something as much determined by the legal framework within which a firm operates as by the economic viability of the firm.

Or as Cyert and March put it, back in 1963, the firm has in the theory of the firm hardly any resemblance with the actual business firms we see in daily life. Such theoretical firms are identified by the fact that they have no complex organization, no problems of control, no standard operating procedure, no controller, and no middle management. Apparently, some indicators (such as brand name and product) exist that define a firm beyond doubt. It remains to be seen, however, whether these common sense indicators can be used in scientific approaches. "The use of the word 'firm' in economics may be different from the use of the term by the plain man" (Robinson, 1932, pp.12). Despite the doubts about compatibility, the idea of regarding the firm as a set of indicators is nevertheless useful, especially in the field of firm demography with its focus on boundaries between firms. One can define a firm as a societal structure qualified by its economic aspect. This definition views the firm as an independent societal structure having a distinct character of its own. The distinctive nature of an enterprise is implicit in its

economic goal (Van Langevelde, 1999). Also Thompson (1989) places an emphasis on the difference in 'definition' between large corporations and small business firms. This concept of the business firm or company, while appropriate for small, owner-managed enterprises, is at considerable variance with reality when applied to the modern large enterprise. The firm as a comparatively small, owner-managed, single business proprietorship with localised markets for its product is one thing, the firm as a large, diversified portfolio of businesses, managed by a team of professional managers and having thousands of employees and stockholders is another.

Taking these ideas together, the immortal firm, the firm's identity and the common sense approach in the present research into old firms, the investigated firms will be constituted by a combination of these ideas.

It is important to determine which of the factors may change over time without damaging the identity of the firm, and which factors will change the identity of the firm if another direction is chosen. It is also possible that only a few changes at one time are allowed. When all the factors within a firm change at the same time, then even the 'general feeling' in the ordinary course of events will be that this is no longer the same firm. Whether the product, the name or the management is the most important determining factor in a firm's identity is a difficult question. The current problem is thus not what is a firm, but whether these 'old' firms remain the same firms over the entire period under investigation. That is, which changes in factors allow a firm's unique identity to continue, and which changes are fatal for the firm's continuity?

For this research the following definition is used: *A firm stays the same firm if the product stays the same or is differentiated in the same product-line, and the name of the company has been unaltered<sup>ii</sup>. Age is defined in years since founding, old are those firms that were founded before 1851 and still exist today.* Changes in management and ownership are not included in this statement, because the period of investigation is such that changes in these factors are inevitable and are considered not to affect the firm's identity as such. Furthermore, other changes, such as location and personnel, are allowed, as long as both the name and the product of the 'original' firm are continued.

The reason to choose the year 1851 is twofold. Firstly, the aim of this research is to investigate a total population of old firms. To meet this objective it was necessary to go back in time to 1851 to create a population of old firms that was small enough to be studied in detail (see the following section and Chapter 3). Secondly, following the year 1851, the industrial revolution took off in the Netherlands (Brugmans, 1956; Kooij, 1988). Choosing a research population founded before this year would ensure that all these old firms were founded before modern industrial businesses had takeoff. A further advantage of this is that all the firms in the risk population have survived the same important events in modern business history.

## 2.4 Search for data

According to the CBS (1902), the first statistical registration of firms, or what were then considered to be important economic actors in the Netherlands, was made in 1813 by D'alphonse during the French period (see, for a more elaborate description, Chapter 3). Other studies were made at several other historical points, such as in 1858 and 1874, and the four Dutch censuses of industry in 1930, 1950, 1963 and 1978. Some of these sources contain very detailed data on the number of firms and the total number of employees in a sector, as well as on all kinds of factories, such as the historical Atlas by Everwijn (1912), Brugmans 'Paardekracht en Mensenmacht' (horse power and human control); and his 'statistics of the Dutch industry in the first half of the 19<sup>th</sup> century' (1956 and 1961). However, although interesting and useful, these sources do not provide names, products and founding years for the various firms described.

Other sources, with perhaps more historical information, were also explored, however all proved fruitless. These included branch organizations through the VNO-NCW (the Confederation of Netherlands Industry and Employers); MKB Nederland (the small and medium sized businesses organization); the Internal Revenue Services, and their old registration books in their museum; and municipality registers and archives. All attempts led to the same conclusion; 'complete' data on statistical business units, as are produced nowadays are very 'modern' in origin. Before this, only the number of firms in a specific sector was registered in a certain year, if at all. Furthermore, the foundation for 'Royal' firms was contacted, since firms that have been honoured (mostly for a 100-year anniversary) with either the royal seal or with the phrase 'purveyor to the court'. It became apparent that only a selected group of old firms have been given this award and, unless one excluded the majority of old firms, these sources were not of use. Also other avenues were tried, like for example only including limited companies, and by trying to explore old data on the registration of stocks and shares. The same conclusion was reached. Certificates of limitation, with information of founding, changes and disbandment are published in the *Nederlandsche Staatscourant*. These are accessible since 1891. Comparable information could be found in the *Staatsalmanak*, which gives information about limited companies since 1885. However, including only limited companies would mean ignoring the many small firms that before 1850 were even more numerous than at present. It was decided (using Birch's 1979 argument) that small firms needed to be included. The same problems arises with the 'naamloze vennootschappen' (limited company) published in Van Nierop and Baak's *Naamloze Vennootschappen* (limited company registration), from 1882 to 1924, but which do include additional information about the registered companies, such as biannual balance sheets. Furthermore, in 1888-1890, Struve and Bekaar did a survey, in the Netherlands, in which the names and



products of several firms were described. However, here the founding dates were missing and only larger firms, with more than ten employees were included.

It was decided, after several fruitless attempts, to abolish an cohort approach since in none of the older sources was the combination of name and founding year found. Since the name of firms has only relatively recently been used as an indicator (CBS, 2000), the cohort approach was rejected, simply because it was not possible to track down an appropriate group of firms. This was very unfortunate since it would be very attractive to be able to complete an entry and exit analysis of the cohorts and, through this, really investigate long-term survival chances. The cohort approach was replaced with a so-called historical inductive approach, in which the survivors are studied in a more spatial event-history view of firms, describing the values of qualitative variables concerning strategy and behaviour of a firm in a particular observation period (Van Geenhuizen, 1993). The events that firms live through and the actions firms take in reaction to these events will influence a firm's survival chances. In an event-history of firms, the study of the spatial history of firms can be a useful and complementary contribution to understanding the demography of firms. The spatial history of firms gives insights into the nature of the spatial changes in the life of the firm (Van Geenhuizen, 1995). This spatial history perspective can indicate the various changes in a firm, such as the transition to another product or relocation. This can be used to see how these spatial changes have influenced the status quo of the firm (Van Geenhuizen, 1993). This type of company history analysis is different from the usual historic analysis because of the spatial angle. The spatial dimension is emphasised by explicit attention on the localised unit, the establishment of the firm, and with this the spatial organisation of the firm under study (Van Geenhuizen, 1989).

Currently, several databases exist that register firms, or companies or enterprises, which can be seen as statistical units of economic activity as described earlier. The Dutch Statistical Bureau (CBS) and the Chambers of Commerce (KvK) have collected data respectively since 1901 and 1920 respectively. In searching for old firms, I ideally needed the year of founding and the name of the firm given that, if the name changed drastically then the date of founding also changed (in the registration of the KvK). The differences between the several current databases are understandable since all registers serve different purposes. The ABR of the CBS has, in principle, a registration of all firms in the Netherlands with the following characteristics being recorded: name, address, activity and number of employees. The data in the ABR comes from several sources, such as the business register of the KvK and internal CBS research. Given these sources, the ABR has an incomplete registration of some points, such as corporate figures that have no obligation to register at the KvK. These are the liberal professions, firms in agriculture and fishery and those firms that have no employees within these groups, these are not registered at the ABR (Kloek, 2002). To keep the ABR up-to-date, especially for small firms, a random sample is surveyed to determine whether the

entry is still economically active. Here the cut-off of at least one active person per firm for a minimum of 15 hours a week is used. Firms that are not included in the ABR are those that have no obligation to register, which are firms without personnel, firms in fishery and the liberal professions; thus similar to the requirements in the business register of the KvK (Kloek, 2002). The ABR is not a suitable source for this particular research since the year of founding is not included. The same is true for LISA. LISA has data about all the establishments in the Netherlands where paid labour is carried out. Including address information, number of employees and sectoral information are known. LISA covers all of the Netherlands, but has no historical data whatsoever. The data from LISA is very good for economic-spatial research, such as to investigate the development of the labour market; however, for historical economic-geographical research the data is useless (Lisa, 2004). The business register of the KvK does provide the information necessary: economic activity, name and year of founding. However, the data from the KvK needs to be studied with care since the files contain several errors and mistakes (compare Wever, 1984).

The Chambers of Commerce (KvK) are regionally-based registration offices of business and industry. Some started as early as 1720 (The Chamber for the province of Zeeland), but it was not until after the French period (1813) that the KvK was legalised through a royal decision. In the 19<sup>th</sup> century the number of Chambers increased rapidly and all the separate Chambers were financially dependant on the various municipalities. At the beginning of the 20<sup>th</sup> century the Chambers were revitalized, with major changes including the addition of 36 regional Chambers and with a new law in 1920 through which the Chambers gained, besides their advisory duties, additional executive duties. The Chambers were now financially independent, receiving their resources directly from the registrations in the business register. In 1924, the Society of Chambers of Commerce (VVK) was founded, which is not a hierarchical institute but rather a collective service point (Blink, 1924). However, in 1985 the KvK was reorganised and since then the number of regional offices in the Netherlands has decreased to 21 offices. The VVK has also been influenced by these reorganizations since the most important data files, the business register and the associations and foundations register (now included in the business register) are now, since the 1970s processed in a cooperative centre in Woerden (Van Hoeve, 1985). Given the long and relatively consistent registration of firms in the business register of the KvK, this register seemed most appropriate as a starting point for the research using historical inductive approach. The database REACH / Van Dijk (<http://reach.bvdep.com/>) is an electronic database from which the necessary information could be obtained and based on the business register of the KvK.

The REACH / Van Dijk database, is a Dutch commercial database which includes all firms in the Netherlands, covering all sectors and sizes. In this database firms can be selected on name, legal status, economic activity, financial records, number

of employees, geographical location and year of foundation. In principle, REACH includes all firms that are registered in the business register of the Chambers of Commerce, the only missing firms being the so-called liberal professions (Verhoeven et al, 2002). The REACH database gets updated every month by the mutation balance of the KvK. The year of founding in this database is in many cases the year of registration of the firm in the business register of the KvK. For firms in the KvK, file registration is obligatory, so the year of registration will in most cases be the year of founding. However, since the business register was not been installed until 1920, firms founded before 1920 had to imput their own year of founding.

The firms chosen for this investigation were selected from REACH on the basis of having a foundation year before 1851. According to REACH, 1188 firms in the Netherlands founded before 1851 still exist. After an inspection for typos; input mistakes; double entries; empty holdings (see also Wever, 1984), and after the decision to exclude agricultural firms, the hotel and catering industry, the retail business and 'street trade'; 467 old firms remained. These 467 firms were all contacted and this resulted in a reduction in the number of firms to 362. This reduction was caused either by the name of the firm being changed, the firm not being founded before 1851 or no longer existing (closure, bankruptcy), the firm being a non-Dutch firm (such as an 'old' foreign firm with an establishment in the Netherlands), or belonging to one of the excluded sectors. These firms were removed from the database. The reason for excluding the 'hotel and catering industry' and retail businesses was that, in a preliminary control survey, it was discovered that a considerable number of firms in these sectors were not as old as claimed. This was due to the fact that, on many occasions, the year of founding was not the year of foundation of the firm but the year of construction of the premises. 'Street trades' were excluded since these do not have a fixed location for doing business, which is the main topic of this research.

## **2.5 Old firms in the Netherlands in 2000**

The data used in this section results from the procedures above. In total, 362 firms were found that satisfied the definition as used in this investigation. In the study of old firms from a spatial view point, the first question that rises is how this population is spatially distributed in comparison with the total population of firms in the Netherlands. In order to determine the regional dispersion of old firms, two steps were taken. First a map was constructed with all the 362 contacted firms, including the location of the old firms and whether these firms have been located on the same location since foundation (see Figure 2.2). Secondly, using a non-parametrical Chi-Square test it was examined whether the distribution of old firms over the twelve provinces was as expected from the distribution of the total firm population over these twelve provinces. The proportional distribution of old firms

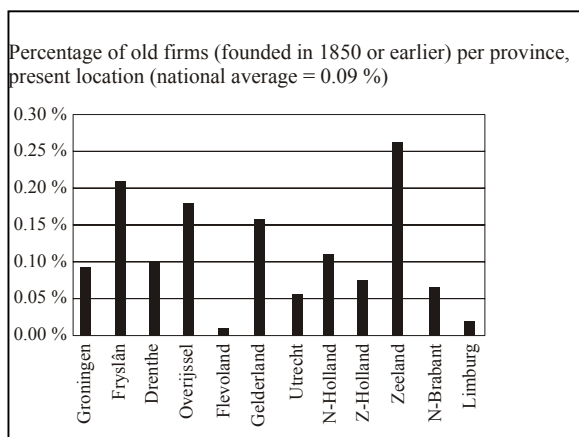
in comparison with the entire firm population, and the sectoral distribution of the old firms, are also described in the following subsections.

### **2.5.1 Absolute distribution of old firms**

Figure 2.2, shows all the old firms in the REACH database that satisfy the definition chosen for the present research. This map also gives a preliminary view of the response and non-response findings of the telephone survey, as will be described in more detail in Chapter 5. For the non-responding firms, only the present location is known and not whether these firms moved to this location. Furthermore, some firms did not know whether they had relocated in the past, due to a 'memory gap'. When this occurred, the firms was placed on the map as 'place of foundation unknown'.<sup>iii</sup>

The first impression from Figure 2.2 is that the distribution of old firms over the Netherlands seems rather equal. However, on closer examination, it appears quite different and unequal, especially considering the distribution of the present firm population over the Netherlands. Today's firm population is mostly in the Randstad provinces in the west, and also higher concentrations of firms are found in Noord-Brabant's cities in the south, and the Arnhem-Nijmegen region in the southeast. Given this, it seems that the distribution of old firms is rather surprising. In the province of Fryslân in the north, there is a quite a high concentration of old firms, and in the neighbouring provinces of Drenthe, Groningen and Overijssel there are relatively few. Furthermore, the high concentration of 'oldies' in the provinces of Noord Holland and Zuid Holland is also apparent. This is quite easy to explain since, at the founding time of the firms being studied, these provinces were already highly urbanised with high population densities in the 18<sup>th</sup> and 19<sup>th</sup> centuries (Stuijvenberg, 1977). In an area with a high concentration of people there will most certainly also be a high concentration of firm activity, and where there were more firms founded it is not strange to see many survivors. The relative 'emptiness' of the provinces of Drenthe, Groningen and Overijssel is also fairly easy to explain. Before 1851, these regions were mostly agricultural in nature and any industry was mostly home employment (Stuijvenberg, 1977). In the founding era, there were not many new start-ups in these areas and hence few survivors nowadays. One might think that this would also be the case for the province of Fryslân, but this province was fairly industrialised before 1851, with a number of potteries, brewers and a tile industry which can be traced back in the present population of old firms. In Chapter 3, this process will be described in more detail.

Figure 2.3: Percentage of old firms per province, present location (national average = 0.09%)



In Figure 2.3, the share of very old firms in the total firm population is close to one in a thousand, but for the individual provinces there are significant differences from this average<sup>iv</sup>. The percentages range from 0.01% for the new polder province of Flevoland (where firms established before 1850 could only have settled after recent relocation) to 0.26% for Zeeland. Next to Zeeland in the southwest and Fryslân in the north, Overijssel and Gelderland in the east have the highest density of old firms. Limburg, Utrecht and Zuid Holland have a relatively low density of old firms. The absolute density is highest in the provinces of Noord and Zuid Holland. The concentration of old firms in the largest cities (indicated by the shaded areas on the map) is noticeable. Naturally this involves Amsterdam, and its neighbouring city of Zaandam, centre of the Zaanstreek region, which was well known for an early concentration of manufacturing firms processing raw materials such as coffee, tea, cocoa, pigments and wood that were brought from all over the world to Amsterdam's staple market before it collapsed in the Napoleonic era. Further Rotterdam, Den Haag, Utrecht and the cities of Leeuwarden, Groningen, Zwolle, Enschede, Arnhem and Nijmegen in the north and east stand out as having old firm concentrations. As Figure 2.2 shows, many firms relocated to such cities in an early phase of their existence, but considerable numbers have also resided in smaller towns since they were founded. The issue of relocation of old firms will be elaborated in later parts of this thesis.

### 2.5.2 Relative distribution of old firms

The distribution of old firms over the twelve provinces is examined with a non-parametrical Chi-Square test to see if it is as to be expected from the distribution of the total firm population. The province of Noord-Holland is divided into the Amsterdam region, the urban area of this province, and the Kop van Noord Holland - the more rural part. The following values resulted (Table 2.1):

Table 2.1: Relative spatial distribution of old firms in the Netherlands

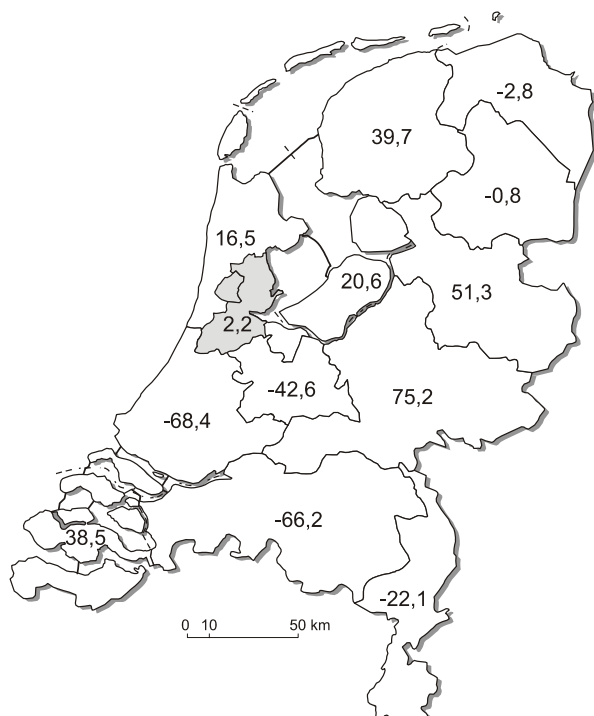
	Observed number of old firms	Expected number of old firms	Residual
Groningen	28	30.8	- 2.8
Fryslân	77	37.3	39.7
Drenthe	26	26.8	- 0.8
Overijssel	118	66.6	51.4
Gelderland	212	136.9	75.1
Utrecht	52	94.6	- 42.6
Limburg	47	69.1	- 22.1
Noord Brabant	117	183.1	- 66.1
Zeeland	63	24.5	38.5
Zuid Holland	186	254.4	- 68.4
Kop van Noord Holland	139	122.5	16.5
Amsterdam region	121	118.8	2.2
Flevoland	2	22.6	- 20.6
Total	1188		

Test statistics: Chi-square: 273.390, df : 12, Asymp. Sig: .000

Source: REACH 2003 (The used data came from the 'polluted' REACH database, and are not 'cleaned' of mistakes or double entries. Assuming that the pollution of the database is more or less equal for all age-cohorts, this will not effect the analysis.)

As can be seen from this table the dispersion of old firms in the Netherlands differs significantly across the provinces in the Netherlands (see Figure 2.4). Generally speaking, old firms are over represented in the peripheral provinces in the northeast and southwest, and underrepresented in the provinces in the west and the south of the Netherlands. The latter provinces are either more urban or more industrial, both representing a more 'dynamic' and modern economy. However, in the province of Noord Holland there are more old firms than expected. The region around the city of Amsterdam is located in this province and is a very economic and dynamic area of the Netherlands. In all the other 'dynamic' provinces there are less old firms than expected. Nevertheless, the explanation for this can perhaps be found in the fact that the greater Amsterdam region (including the Zaandam region) is very dynamic, in contrast with the north part of Noord Holland - 'de kop van Noord Holland' - that is known as a less dynamic area. Dividing the province into these two regions does largely confirm this. From Table 2.1 and Figure 2.4, it can be seen that with the division of Noord Holland into more and less dynamic parts, the less dynamic part has an overrepresentation of old firms, while the more dynamic part of Noord Holland - the greater Amsterdam region- has a distribution of old firms which is close to the expected number.

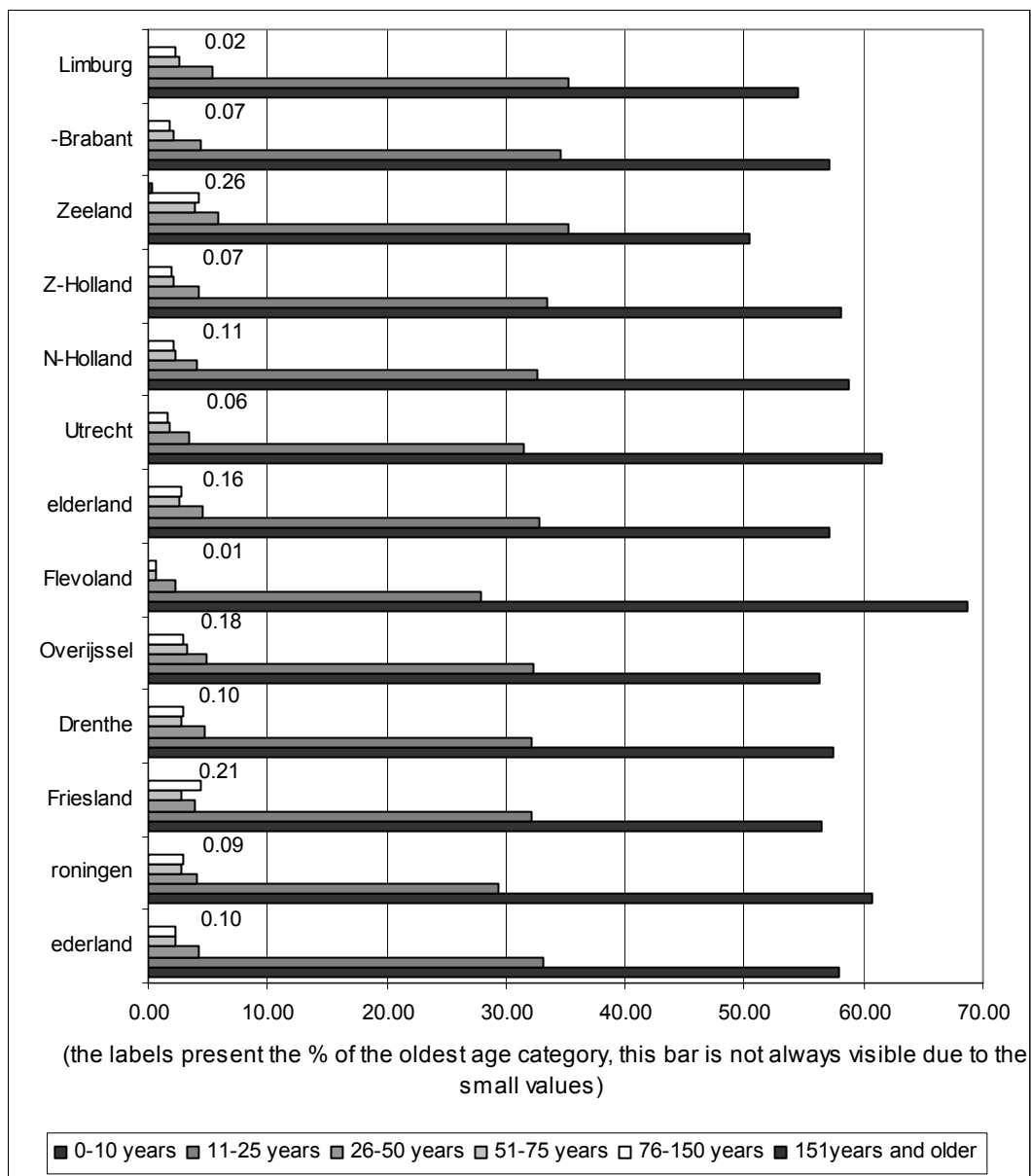
Figure 2.4: The residual figures for the share of old firms in the provinces of the Netherlands



### 2.5.2 Age distribution of firms

Figure 2.5 shows the firm-age pyramids for the Netherlands as a whole and for the different provinces. It is very clear that the youngest age group is the largest with, for all provinces, more than 50% of the total population. The province of Flevoland has the largest percentage of firms younger than 10 years: 68.9% of Flevoland's total firm population. This can be explained by the fact that Flevoland is a rather 'new province' which was created by the 'polder' land creation in the second half of the 20<sup>th</sup> century.

Figure 2.5.: Age-pyramids of firms in the Netherlands



Source: REACH/ Van Dijk (2003)

The lowest percentage of the youngest group is in the province of Zeeland, which possibly can be explained by the fact that Zeeland is a province in the more peripheral regions of the Netherlands, consisting of several peninsulas, with less connecting infrastructure than other parts of the Netherlands. In general, all the provinces have the same pyramid shape with a very large basis of young and 'middle-aged' firms. For the Netherlands as a whole, the sum of the first three age



groups (0-10 year, 11-25 years and 26-50 years) covers 95.4% of the total firm population. The individual provinces display similar images.

The oldest age group is, for this research, the most interesting age-category in these pyramids. It is quite clear that this group is a very small percentage for all the provinces as well as for the Netherlands as a whole. Again the provinces of Zeeland and Flevoland hold the extremes for this category. In the province of Flevoland, the age group 151 years or older only represents 0.01% of the firm population. This can be explained using the same argument as for the high percentage of young firms in the same province. The province was non-existent in 1851, so the few old firms that are now located in Flevoland must have moved to there. For the province of Zeeland it is less clear why this province has the largest percentage of old firms of 0.26%. As explained using the results of the non-parametric Chi-Square tests in Section 2.4.2, this province is 'less dynamic' and therefore the high percentage of old firms is consistent with the assumption that in dynamic areas there are relatively fewer old firms and, in less dynamic areas, there are relatively more old firms.

#### **2.5.4 Sectoral distribution of old firms**

In defining firms for this investigation, the economic activity of the firm is also of importance. This is the product that they produce and/or the services that they offer. In the REACH database the economic activity of the firm is classified using the Chambers of Commerce BIK code. The BIK code is the Dutch taxonomy of the United Nations' industrial classification (ISIC). The BIK code is to a large extent attuned to the SBI codes as used by the Dutch Statistical Bureau. Both coding systems have similar main categories, however, the sub-classification of the BIK is larger, so that the activities of the firms can be classified in more detail.

For reasons of comparability later in this research, the sectoral division of old firms has been categorized in the same way as was done in 1820, as has the classification of industry into manufacturing groups in absolute number of firms (Brugmans, 1956). The classification has been recategorized from the BIK code as used in REACH database, back to the classification system used in 1820 (see for a more elaborate discussion of this the next chapter). The old firms in the Netherlands can be divided into the sectors presented in Table 2.2, as found in REACH database.

Table 2.2: Sectoral division of old firms over the provinces in absolute numbers N = 362

	Sectors					Total
	Trade	Construction	Services	Transportation	Industry	
Groningen	4	1	2	0	3	10
Fryslân	11	6	2	1	12	32
Drenthe	1	1	2	0	0	4
Overijssel	1	7	4	1	14	27
Gelderland	8	13	1	4	36	62
Utrecht	4	2	6	1	11	24
N Holland	17	11	13	3	26	70
Z Holland	13	15	14	5	22	69
Zeeland	0	6	2	1	10	19
N Brabant	2	11	6	1	13	33
Limburg	3	1	2	1	5	12
Total	64	74	54	18	152	362

Source: REACH/ Van Dijk (2001)

From Table 2.2 it can be seen that the old firms are mostly active in the industry, construction and trade sectors. This is understandable given the sectoral distribution at the period of founding, which will be further discussed in the next chapter. The industrial sector is the largest sector overall and, for this reason, the industry sector is also divided into manufacturing groups according to the classification as used in 1820. The results are presented in Table 2.3 below.

In Tables 2.3 and 2.4 the old industrial firms are recategorized into the manufacturing groups that they would have been classified in producing this product in 1820. Where the old firms in other sectors could be reclassified back to these manufacturing groups, this was also done. For example, one firm in Drenthe that is now in services, could be reclassified into the manufacturing group ‘clothing & (dry) cleaning’. Since the definition used in this research requires that the basic product or activity of a firms has not changed significantly, it can be assumed that the recategorization shown in Tables 2.3 and 2.4 gives a fair representation of the categories these firms would have fallen in at the time of founding. It can be seen that in all provinces within the industrial sector, the ‘construction’ manufacturing group was present in all provinces. The ‘book printing’ and ‘shipbuilding & other vehicles’ manufacturing groups are also present in most provinces. The manufacturing groups that are present in the highest absolute numbers of old firms across all provinces are ‘construction’ and ‘foodstuffs & beverages’, followed by ‘book printing’, ‘metal construction’ and ‘shipbuilding & other vehicles’. In the following chapter, the growth of various sectors and manufacturing groups over time will be discussed in more detail and compared to older data sources containing information about the Netherlands.

Table 2.3: Manufacturing groups in absolute number of firms in 2001, recoded to the 1820-classification, selected per province

	Manufacturing groups
Groningen	Chemicals (1), construction (1), leather, oilcloth & caoutchouc (1), mining (1), shipbuilding & vehicles (2), and wood, straw works & cork (1)
Fryslân	(Electric) machinery & apparatus (1), book printing, lithography & photography (1), clothing & (dry) cleaning (1), construction (6), foodstuffs & beverages (3), furniture (1), metal construction (1), ceramics, glass, lime & stone (2), shipbuilding & other vehicles (3), textile manufacturing (3), wood, straw works & cork (2), other (1)
Drenthe	Chemical industry (1), clothing & (dry) cleaning (1) and construction (1)
Overijssel	(Electric) machinery & apparatus (2), book printing, lithography & photography (2), chemical industry (1), clothing & (dry) cleaning (1), construction (7), foodstuffs & beverages (3), gas, water & electricity (1), metal construction (2), shipbuilding & other vehicles (2), and textile manufacturing (2)
Gelderland	(Electric) machinery & apparatus (4), book printing, lithography & photography (6), chemical industry (1), construction (13), foodstuffs & beverages (7), furniture (2), lightning, oil, varnish & fat (2), metal construction (5), ceramics, glass, lime & stone (2), shipbuilding & other vehicles (6), steam & other engines (4), textile manufacturing (1) and wood, straw works & cork (1)
Utrecht	(Electric) machinery & apparatus (3), chemical industry (2), clocks & instruments (1), clothing & (dry) cleaning (2), construction (2), foodstuffs & beverages (2), metal construction (1), ceramics, glass, lime & stone (1), shipbuilding & other vehicles (1), textile manufacturing (2) and wood, straw works & cork (1)
Noord Holland	Book printing, lithography & photography (10), chemical industry (5), clocks & instruments (1), clothing & (dry) cleaning (2), construction (12), foodstuffs & beverages (6), furniture (1), lightning, oil, varnish & fat (1), metal construction (4), paper (3), ceramics, glass, lime & stone (1), shipbuilding & other vehicles (2), steam & other engines (1) and wood, straw works & cork (3)
Zuid Holland	Book printing, lithography & photography (5), clocks & instruments (1), clothing & (dry) cleaning (2), construction (15), diamonds & other gemstones (1), foodstuffs & beverages (10), furniture (2), gas, electricity & water (1), metal construction (2), ceramics, glass, lime & stone (1), shipbuilding & other vehicles (4), steam & other engines (2) textile-manufacturing (1) and other (2)
Zeeland	(Electric) machinery & apparatus (1), book printing, lithography & photography (1), construction (6), foodstuffs & beverages (3), metal construction (1), mining (1), shipbuilding & other vehicles (1), steam & other engines (2) and other (1)
Noord Brabant	Book printing, lithography & photography (1), chemical industry (1), clocks & instruments (1), construction (11), diamonds & other gemstones (1), foodstuffs & beverages (4), furniture (1), metal construction (2), ceramics, glass, lime & stone (1), textile-manufacturing (2) and wood straw works & cork (1)
Limburg	Book printing, lithography & photography (1), construction (1), foodstuffs & beverages (1), metal construction (3), ceramics, glass, lime & stone (2), and other (1)

Source: REACH/ Van Dijk (2001) and Brugmans (1956)

Table 2.4: Absolute number of old firms for each manufacturing group

Manufacturing group	Number of old firms
(Electric) machinery & apparatus	11
Bog ore, coals & peat extraction (mining)	2
Book printing, lithography & photography	27
Ceramics, glass, lime & stone	9
Chemical industry	12
Clocks & instruments	4
Clothing & (dry) cleaners	9
Construction	75
Diamond & other gemstones	2
Foodstuffs & beverages	39
Furniture	7
Gas, electricity & water	2
Leather, oilcloth & caoutchouc (rubber)	1
Lightning, oil, varnish & fat	3
Metal construction	21
Paper	3
Shipbuilding & vehicles	20
Steam- & other engines	8
Textile manufacturing	11
Wood, straw works & cork	9
Other	5
<b>Total old firms in manufacturing groups</b>	<b>280</b>

Source: REACH/Van Dijk (2001) and Brugmans (1956)

## 2.6 Concluding remarks

In this second chapter, the definition of firms in general and more particularly the definition of old firms for this specific research has been discussed. Although, in theory, a large discourse exists about defining firms, in practice researchers are forced to be more pragmatic in defining their research object since they need to adjust their wishes to reflect data availability. In this investigation this is most certainly the case, especially since the investigation covers such a long period of time and data for old firms was quite hard to find. The definition chosen for this investigation is the following. ‘A firm stays the same firm if the product stays the same or is differentiated in the same product-line, and the name of the company has been unaltered. Age is defined in years since founding, old are be those firms that were founded before 1851 and still exist today’.

362 old firms were found in the Netherlands that met this definition and the initial results concerning the firms selected according to the chosen definition show that the population of old firms is not evenly distributed over the Netherlands and that a sectoral bias exists within the group of old firms, and also over the provinces. A preliminary conclusion is that regional differences do indeed exist within the age-

distribution and sectoral distribution of firms in general, and more particularly with old firms in the Netherlands. This could indicate that survival chances for firms differ within sectors and between regions. The impression arises that old firms are mainly represented in the so-called old-fashioned sectors, which is hardly surprising given the founding date of these firms. In Chapters 3 and 4, first a historical overview of the development of trade and industry is given, followed by theoretical considerations on long-term firm survival. In Chapters 5 and 6, the dataset selected in this chapter will be more thoroughly investigated and confronted with a set of younger firms.

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<sup>i</sup> For a more detailed discussion on the theory of Organisational Ecology see Chapter 4.

<sup>ii</sup> The name may have modest adjustments and still be considered unaltered in this investigation. The decision is between drastic and complete name changes and minor changes. Drastic changes are for example from 'de Kaashal' to 't Kaeswienkeltje', and from 'Bruins' to 'Bedrijfsreclame R.B. VOF' which would be considered name changes in this research.. A minor name change is for example from 'W. Th van Dijk' to 'W. Th. van Dijk and son' which is considered not to be a change in name in this research (compare Van Steen, 2004).

<sup>iii</sup> This map has been published before in Pellenbarg, P.H. and P.J.M. van Steen (2003) The Netherlands in maps (2003-4) Demography of firms: old firms. *Tijdschrift voor Sociale en Economische Geografie* 94 (4), pp. 534, the data however, originates from this research.

<sup>iv</sup> This figure is based on the total number of old firms found in the REACH / Van Dijk database and includes all sectors, including the sectors excluded in the survey. This explains why in the map there are no old firms in Flevoland, but the diagram gives a small percentage for this province.



Figure 2.2: Present location of old firms in the Netherlands (2001)

Present location of firm establishments  
founded in 1850 or earlier (n=362)

- still located in place where firm  
was originally founded
- founded in another place  
(relocated firm)
- × place of foundation unknown

■ places with population  
of 100,000 or more (2002)

