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# Economic effects of enterprise dynamics

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**We studied the development trajectories of starters under Dutch and under foreign control. If they were similar at birth with respect to employment, sector of activity and turnover, did they develop differently later on? We also studied developments of exiters. What were the differences between firms under Dutch and under foreign control in the years before they exit the market? We found that after taking the possibility of exit into account, they have similar growth rates for employment and turnover and show the same path of decline for turnover and exports before they exit. But employment at foreign controlled enterprises diminished much more than at domestically controlled enterprises.**

## 7.1 Introduction

In this chapter we will discuss possible differences in the development of enterprises under domestic and under foreign control in relation with enterprise dynamics. This is relevant knowledge for providing subsidies for starters, especially if the analysis shows that one locus of control is eventually more successful than the other. The chapter will answer the following two questions:

- If enterprises were similar at birth with respect to sector of activity, trade status, employment and turnover, but differed for locus of control, do they develop differently?
- Were there such differences between firms under Dutch and foreign control in the years before they exited?

This chapter will also examine post-entry growth in employment, turnover, imports and exports. How many of the newly created jobs remain? It is also important to consider the middle term impact of entry, which we will do in this chapter.

Survival and growth after survival should be considered together when studying the economic consequences of enterprise dynamics. In chapter 6 we already observed that enterprises under domestic and foreign control have different probabilities of survival. However, this is insufficient information if we want to determine whether the economic impact of foreign controlled starters differs from that of domestically controlled ones. For example, the exit rate for enterprises under foreign control may be lower than that of those under Dutch control, but perhaps the foreign controlled survivors have a lower growth rate than the surviving enterprises under domestic control. Then the economic impact of the former could still be smaller on average. So it is necessary to analyse survival and growth rates after survival together.

The chapter proceeds as follows. The next section presents some theory and background. In section 7.3 we describe the data and methods. Section 7.4 presents the empirical results about starters, while section 7.5 focuses on exits. The chapter ends with conclusions and suggestions for further research.

## 7.2 Theory and background

Based on what we explored in chapter 6, we expected that domestic and foreign controlled enterprises have different survival rates and different growth rates after survival. One reason for such differences is the size when they start. Several learning models (Jovanovic (1982), Ericson and Pakes (1995)) indicate that enterprises start at a sub-optimal size and use the learning opportunities to expand after success. During their first years, enterprises search for the organisational structure that suits them best and also for the optimal efficiency scale in order to be competitive. Foreign controlled enterprises are, on average, larger at start-up (table 6.4.2). This reflects their greater ability to attract financial resources. Audretsch (1990) already pointed out that an enterprise that starts larger needs less time to achieve an efficient scale. So we expected that foreign controlled enterprises would attain the optimal structures and efficiency scales faster than enterprises under domestic control, which would be expressed in higher growth rates.

There is much literature about the consequences of enterprise dynamics in performance or survival for domestic and foreign controlled enterprises when it concerns acquisitions. For example, Bandick and Holger (2009) analysed the effect of foreign acquisition on survival probability and employment growth using data on Swedish manufacturing plants during the period 1993–2002. And Hagemeyer and Tyrowicz (2011) used a large panel of firm-level data from Poland and match foreign owned firms to a control group of domestically owned companies to analyse various performance indicators.

There is limited literature about the difference in economic impact of the birth of a foreign controlled versus a Dutch controlled firm. Therefore we look at a related research line that uses similar methods for a similar yet different question. Namely, the impact of start-up subsidies on new firms' survival. Désiège et al. (2010) give an overview of such studies, pointing out that governments in all OECD countries have developed programs to help new firms. They point out the need to use rigorous methods that evaluate if differences in the outcomes between groups are caused by public support or not. In this chapter we will use such evaluation methods to answer our own question of whether or not the ownership characteristic between Dutch and foreign controlled enterprises causes differences.

New enterprises create many new jobs. For example, Haltiwanger et al. (2010) found that firm births were responsible for 17 percent of all newly created jobs in the United States during 1992–2005. However, it is not known how many of these jobs remain. This chapter considers the middle-long term impact on employment for the cohort of enterprises that started in 2007, by following them between 2007–2011. The developments at Dutch and foreign controlled enterprises are shown separately, which enabled us to make a comparison. Of course it is not sufficient to show only a comparison between these two

categories for 2008 alone, because the middle-long term impact may differ from the short-term impact.

The results about the consequences of enterprise dynamics presented in this chapter are an addition to those presented in the Internationalisation Monitor of 2011. There Fortanier et al. considered the consequences of births, exits and acquisitions during 2000–2005 for employment and wages. This chapter uses more recent data and different outcome variables. However, it does not discuss the consequences of acquisitions.

## 7.3 Data and methods

### Dataset and variables

The dataset constructed for the analyses in this chapter includes demographic and economic variables over the period 2007–2011 on a yearly basis. The demographic variables are the ones used in chapter 6, namely enterprise births and deaths, sector of activity, locus of control and international trade status. In addition economic variables are included, namely turnover, value added, labour productivity, import and export values. The time span for value added ranges from 2007 to 2010 due to data availability.

The dataset used does not have the advantage of the dataset described in 6.3, namely that no variables are missing. In principle, turnover and value added should be known for all enterprises, but in practice this is not always the case (see paragraph 9.2 for further information). Table 7.3.1 shows the percentage of observations for which there was information on turnover and value added available. Labour productivity is defined as value added divided by persons employed, and because the number of persons employed is always known, labour productivity is available if and only if value added is available.

### 7.3.1 Availability of variables

	2007	2008	2009	2010	2011
	%				
<b>Turnover</b>					
Dutch controlled	78	78	77	88	87
Foreign controlled	65	69	62	76	78
<b>Value added</b>					
Dutch controlled	62	65	64	58	.
Foreign controlled	52	54	54	43	.

There is more data available on Dutch than on foreign enterprises for both variables. This is because their tax structures differ, and foreign controlled enterprises are often under no obligation to report to the tax survey that we used to calculate turnover and value added. The availability of the variable turnover increased substantially in 2010 probably because Statistics Netherlands introduced an extended concept of an enterprise (OG+) in that year. This allowed a better matching of the fiscal data (on the units of the tax authorities) to the statistical data (on the units in the General Business Register). There is a decrease in availability of the variable value added in 2010 because enterprises still have time to file their tax reports for 2010.

Apart from the missing values for turnover and value added, there are also missing values for the import and export values. This can have two causes. First, if there is no trade, the value of imports (exports) is equal to zero, but since an enterprise would not have to report this it may appear in the data with a missing value. Second, the value of imports (exports) is not zero, but this information is lost after matching of the international trade data to the general business register. These two cases cannot be distinguished. As the international trade value is linked for almost all enterprises in the business economy, we will treat the international trade data as if it is exhaustive.<sup>1)</sup>

#### Propensity score matching

The results may be biased due to missing data. Yet another form of bias may appear when we only consider the group of survivors. It has been pointed out in the literature that growth is only known for survivors (Mansfield 1962, Fortanier et al. 2011). So if two groups with different survival rates are being compared, considering only growth of the total

<sup>1)</sup> Chapter 10 in this edition of the Internationalisation Monitor provides more information on the international trade of Dutch enterprises and the linking problems encountered in the process.

group creates bias. It is then necessary to distinguish two groups: starters and starters who survive, as already noted by Dunne et al. (1989).

There is also observational bias in terms of locus of control, because for larger enterprises it is known whether they are under domestic or foreign control, but not always for smaller enterprises. In that case the locus of control is set to domestic. An ordinary least squares approach does not solve this problem. A solution to the observational bias is to use propensity score matching and only then analyse differences in outcomes. The basis for modern propensity score matching was laid out in the seminal paper of Rosenbaum en Rubin (1983). Our analysis is as follows:

1. Create propensity scores for all enterprises, reducing several enterprise characteristics to a one-dimensional propensity score. Here the propensity score is the probability of being under foreign control, conditional on some observed enterprise characteristics. So, enterprises with similar characteristics in 2008, such as size and turnover, will have similar propensity scores.
2. Match foreign enterprises to domestic enterprises that have approximately the same propensity score, and therefore similar characteristics.
3. Analyse the matched sample for outcome variables in 2011. For enterprises that have exited before 2011, these variables will be set to zero. The z-score for the difference between the two groups was calculated using bootstrap re-sampling methods.

The analysis was conducted using the procedure `psmatch2` (Leuven en Sianesi 2003) in Stata.

Due to the matching procedure, which involves the estimation of a model, the proof of causality is not as strong as that of a randomised trial. Furthermore, ideally the matching characteristics are known first and only then an owner (and locus of control) is chosen. This would ensure that the characteristics of the enterprise are not caused by the locus of control itself. Here this is not the case. All matching characteristics are known at the birth of an enterprise. It is already known by then whether it will be a domestic or foreign controlled enterprise. This does not matter for the sector of activity, because we can observe it immediately and match on it. But it might matter for, e.g., turnover. Our goal is to see whether there are different growth paths. And if the largest differences for turnover already take place in the start-up year, we will not observe them because we only use data for the first year (2008) where that data covers the whole year.



## Description of the analysis

The analysis of starters begins with the complete set of enterprises that started in 2007. Some tables follow about these starters, to get an impression of their contribution to the economy during 2008–2011. Then the dataset is reduced such that only those enterprises remain that started in 2007 and still exist in the next year 2008. Subsequently, we first used propensity score matching to match starting Dutch controlled and foreign controlled enterprises in order to compare similar start-ups. If any of these enterprises no longer exist in 2011, all their outcome variables (such as turnover) are set to zero. In a second step, we analysed the matched sample. We used bootstrap re-sampling methods to obtain standard errors, which enables us to decide whether or not the differences found are statistically significant. Note that these do not account for the estimation uncertainty created in the matching process. In addition, we conducted a similar analysis for starters that did survive up till 2011, to see whether there are differences in turnover, employment and trade growth between foreign controlled firms and Dutch firms, conditional on survival.

In section 7.5 we carried out a similar analysis on exits as we did on starters. First, several tables show the economic impact of the enterprises that existed in 2007 and exited in 2011. Chapter 6 already yielded several characteristics that influence survival. Based on these characteristics and growth in the year before matching (to pick up any already existing decline), we calculated propensity scores. Using these scores we matched foreign exits to domestic exits. The matched sample is examined to see whether there are differences between domestic and foreign exits.

# 7.4 Economic development of starters

This paragraph concerns enterprises that started in 2007 irrespective of survival up to 2011. We start by showing the absolute contribution of Dutch and foreign controlled enterprises to total employment, turnover, imports and exports. Then these numbers are put into perspective by comparing them to the totals of the business economy. Subsequently, the growth paths of starting Dutch and foreign controlled enterprises are compared.

Table 7.4.1 shows that there are considerable differences between total turnover of starters under domestic control and of starters under foreign control. There are far more domestic starters (roughly 107 thousand as shown in the annex of chapter 6); therefore their totals are higher than the totals of foreign starters.

Total turnover of the cohort of 2007 was lower in 2011 than in 2008. In this period, total turnover of Dutch controlled enterprises contracted relatively more than foreign controlled firms, namely 22 percent versus 3 percent. Other indicators of the economic impact of the cohort, namely employment, imports and exports, were all lower in 2011 than in 2008 as well, but especially for Dutch controlled firms. The contraction of international trade in 2009 is clearly visible in the table. However, during the whole period 2008–2011 trade declined slower than employment. This is not surprising, because graph 6.6.3 already showed that international traders are more likely to survive. The decline of the import and export values is also cushioned by rising prices.

#### 7.4.1 Totals for Dutch and foreign controlled enterprises, starters in 2007

	Unit	2008	2009	2010	2011
<b>Dutch controlled</b>					
Employees	1,000	188	166	126	118
Turnover	million euro	22,870	17,152	18,457	17,921
Imports	million euro	2,843	1,903	1,948	2,179
Exports	million euro	2,794	2,292	2,226	2,370
<b>Foreign controlled</b>					
Employees	1,000	9	8	6	5
Turnover	million euro	2,701	2,298	3,334	2,632
Imports	million euro	2,450	2,009	2,183	2,145
Exports	million euro	2,351	2,160	2,497	2,454

The share of the cohort in the total business economy<sup>2)</sup> is shown in table 7.4.2. These shares decline slowly. This is because the survivors do not grow sufficiently to compensate for the exits, and because new cohorts have entered the market to take their share as well. The share of starters in total imports and exports declined more slowly than their share in turnover during the period 2008–2011. Again, this is explained by the higher probability of international traders to survive.

When comparing the relative contribution of Dutch controlled firms to that of foreign controlled firms, we see that the Dutch controlled starters of 2007, due to their overwhelming numbers, contribute the most to total turnover, employment and value added, even after five years. In terms of trade value, both types of enterprises contribute the same.

<sup>2)</sup> NACE Rev. 2 section B to N, excluding K.

### 7.4.2 Share of starters in 2007 in the total business economy

	2008	2009	2010	2011
	%			
<b>Dutch controlled</b>				
Employees	4.0	3.9	3.6	3.5
Turnover	3.0	3.1	2.7	2.6
Value added	2.5	2.4	2.7	.
Imports	1.1	0.9	0.9	0.9
Exports	1.0	1.1	1.0	1.0
<b>Foreign controlled</b>				
Employees	0.2	0.2	0.2	0.2
Turnover	0.4	0.4	0.5	0.4
Value added	0.5	0.5	0.5	.
Imports	0.9	1.0	1.0	0.9
Exports	0.8	1.0	1.1	1.0

Now consider the combined effect of survival and performance. The rest of this paragraph concerns enterprises that started in 2007 and still existed in 2008, irrespective of survival up to 2011. When an enterprise exits the market before 2011, we set the turnover of this enterprise to zero for the exited years. Because there are many exits during time, the average yearly turnover of starters in 2007, survivors and exits together, drops from 258 thousand in 2008 to 185 thousand in 2011. From table 7.4.3 also follows that the average turnover is larger for starting foreign controlled enterprises than for domestic controlled enterprises.

Removing the exits and considering only the survivors shows that their average turnover per firm grows during the time period 2008–2011, for both loci of control. This growth is larger for a firm under foreign control than for a firm that is under Dutch control.

### 7.4.3 Average turnover at Dutch and foreign controlled enterprises, starters in 2007

	2008	2009	2010	2011
	<i>thousand euro</i>			
<b>Dutch controlled</b>				
Survivors and exits	258	188	190	185
Survivors up to 2011	288	272	305	302
<b>Foreign controlled</b>				
Survivors and exits	8,234	6,922	8,593	6,499
Survivors up to 2011	11,415	8,882	11,445	12,640

This table only shows some outlines, which is insufficient for a proper comparison of foreign controlled enterprises and domestic controlled enterprises. These differ in general, for example for size and sector of activity. Furthermore, on average foreign controlled enterprises have higher turnover, higher salaries and higher productivity, even when controlling for size of employment or sector of activity (Internationalisation Monitor 2009 and 2010). Therefore, controlling for enterprise characteristics is necessary for a proper comparison.

We do this by matching foreign controlled enterprises to similar Dutch controlled enterprises based on propensity scores, and then analyse the data. Table 7.4.4 shows the variables on which enterprises were matched and from which time period they were chosen.<sup>3)</sup> Just as in chapter 6, we aggregated sector of activity into six different groups, namely 1) manufacturing, 2) construction, 3) wholesale trade, 4) transport and storage, 5) retail trade, hotels and restaurants, and 6) other services. International trade status consists of four different values, namely, an enterprise can be a 1) non-trader, 2) an importer (only), 3) an exporter (only) or 4) a two-way trader (import and export activities).

We matched 170<sup>4)</sup> foreign controlled enterprises with the same number of Dutch controlled enterprises. The latter group was selected from a group of approximately 58 thousand enterprises. If an enterprise did not exist anymore in 2011, all its values were set to zero in the exit years. So not only firms that exist during the whole time period are matched. This makes it possible to analyse the combined effect of survival/exit and growth after survival.

#### 7.4.4 Matching variables and reference period

Variable	Reference period
Sector of activity	2007
Persons employed	2008
Log (turnover)	2008
Trade status	2008

<sup>3)</sup> The enterprises are not active during the whole year of 2007; therefore matching on outcome variables such as turnover is for the value in 2008.

<sup>4)</sup> Not every variable was available for all enterprises during the whole time period under concern. Panel data is needed for a comparison throughout the years. This reduced the group of foreign controlled starters to 170 enterprises.

### 7.4.5 Averages before and after matching, 2008

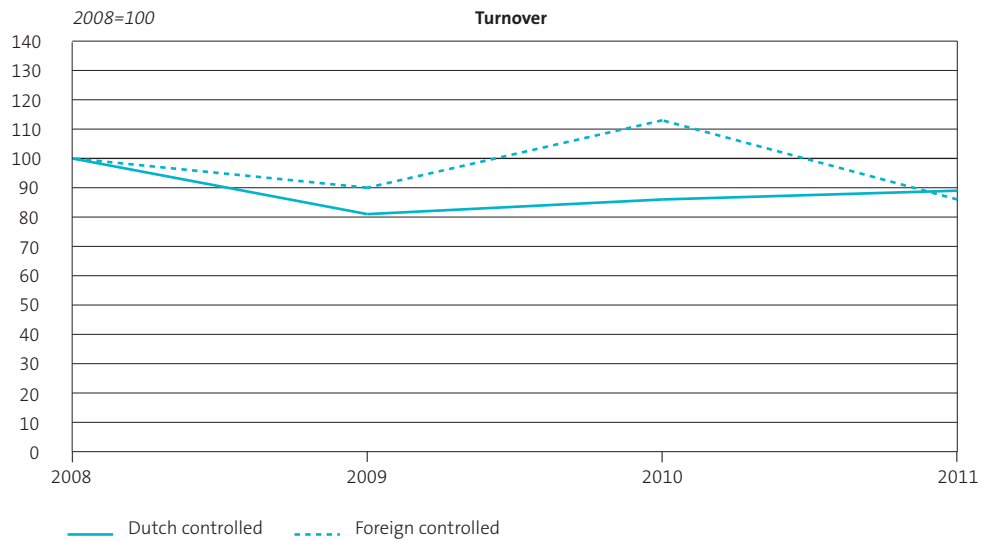
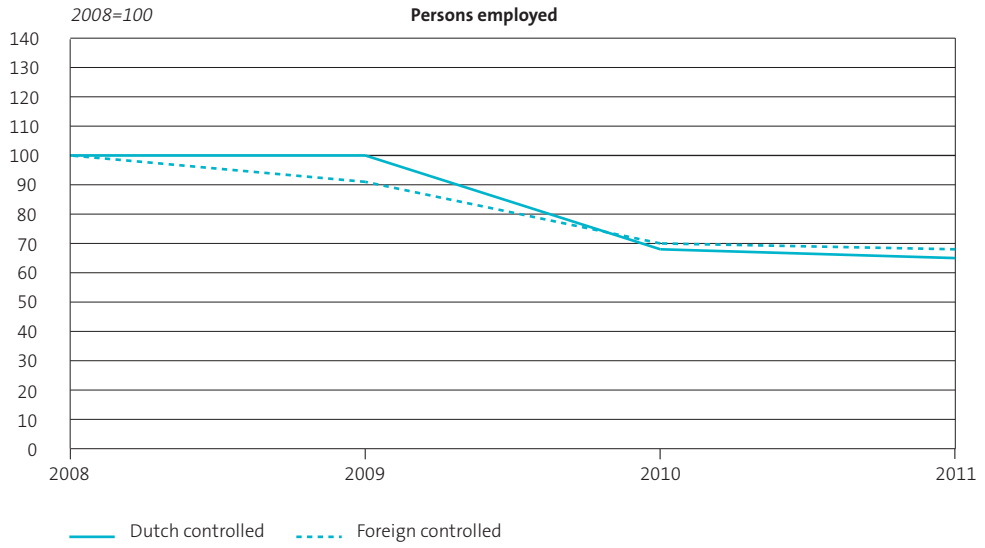
	Unit	All Dutch controlled enterprises	Matched Dutch controlled enterprises	Matched foreign controlled enterprises	Difference matched enterprises
Persons employed		1.9	26.6	24.6	2.0 (0.20)
Turnover	<i>thousand euro</i>	236	10,593	13,099	-2,506 (-1.07)
Exports	<i>thousand euro</i>	15	2,917	2,776	141 (0.12)
N		58,081	170	170	

Z-score in brackets next to difference.

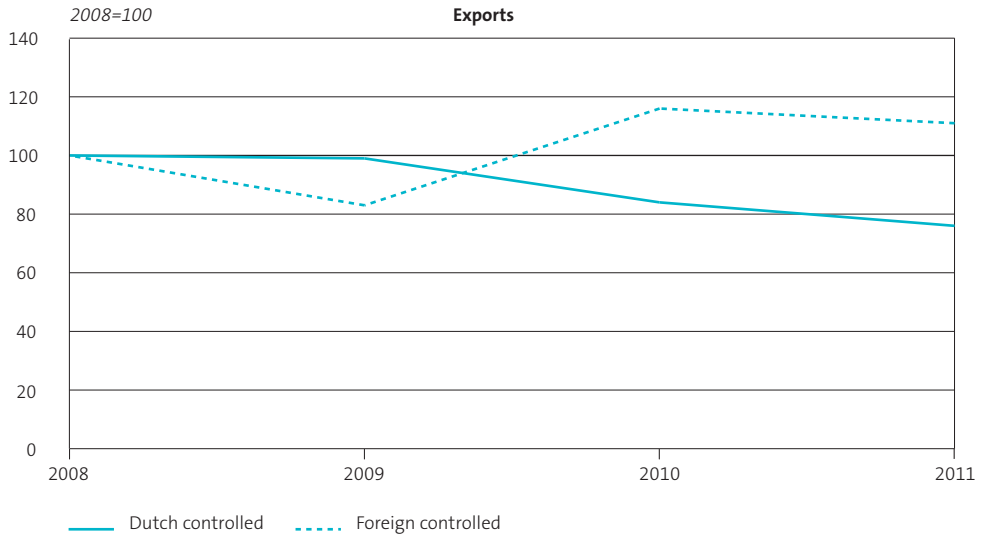
Table 7.4.5 clearly shows that the two groups are different before matching, but that we were able to find comparable Dutch starters of similar size in terms of employees, turnover and exports. This allows us to make an unbiased comparison of the development in employment, turnover and exports of Dutch starters versus foreign controlled starters.

Now consider differences between the matched starters of 2007, whether they survived up till 2011 or not. Graph 7.4.6 shows the growth paths of the average number of employees, turnover and exports of the matched Dutch and foreign controlled starters. We see that employment declines for both groups, and at similar rates. Turnover also declines, but at a slower rate. The fact that the 2011 indexes for turnover and exports are higher than for employment might be explained by inflation that increases turnover and exports, but not employment. Exports for the Dutch controlled enterprises decreased, but for the foreign controlled enterprises exports even increased compared to 2008. Maybe they are better in establishing and upholding an international network. The tests shown in table 7.4.7 do not show statistically significant differences in 2011 between the two groups for any of the three variables.

### 7.4.6 Comparison of similar Dutch and foreign controlled firms, starters in 2007



#### 7.4.6 Comparison of similar Dutch and foreign controlled firms, starters in 2007 (end)



#### 7.4.7 Averages for matched enterprises, 2011

	Unit	Matched Dutch controlled enterprises	Matched foreign controlled enterprises	Difference matched enterprises
Persons employed		17.4	16.8	0.6 (0.12)
Turnover	<i>thousand euro</i>	9,444	11,280	-1,836 (-0.84)
Exports	<i>thousand euro</i>	2,216	3,095	-879 (-0.67)
N		170	170	

Z-score in brackets next to difference.

When we consider only surviving enterprises, the results change. This analysis (not shown) yielded that the foreign enterprises grow more than their Dutch counterparts, but that these differences were not statistically significant. This suggests that, all else being equal, foreign enterprises may be more efficient but only conditional on surviving, because they have a higher risk of premature exit than the matched Dutch controlled enterprises.

## 7.5 Economic development before exit

This paragraph concerns enterprises that exited in 2011<sup>5)</sup> and already existed in 2007. It starts by showing the absolute contribution of Dutch and foreign controlled enterprises to the Dutch economy. Then the averages of these variables are given for Dutch and foreign controlled exits. Subsequently, the paths of decline for exiting Dutch and foreign controlled enterprises are compared.

### 7.5.1 Totals for Dutch and foreign controlled enterprises, existing in 2007, exiting in 2011

	Unit	2007	2008	2009	2010	2011
<b>Dutch controlled</b>						
Employees	1,000	84	88	84	70	61
Turnover	million euro	11,170	12,410	8,948	7,961	1,474
Imports	million euro	1,559	1,888	1,563	1,083	498
Exports	million euro	2,051	2,162	1,733	1,894	627
<b>Foreign controlled</b>						
Employees	1,000	9	9	9	7	6
Turnover	million euro	2,121	2,551	1,705	1,389	478
Imports	million euro	581	582	429	446	228
Exports	million euro	750	705	520	532	294

Table 7.5.1 shows total employment, turnover, imports and exports of the groups under concern. Because there are far more Dutch than foreign controlled exits, their totals are also much higher. Turnover and exports were affected already two years before exit. Employment only started to decrease in the year before exit. Labour hoarding (see also chapter 4) is one of the explanations. The dip in exports in 2009 can partially be explained by the sharp fall in exports that year in general. But for the exits turnover fell far more than in the economy as a whole.

<sup>5)</sup> A fraction of the exits in 2011 only stopped their activities temporarily and were reactivated in 2012. However, because this year is not yet finished, it is impossible to tell which ones were reactivated and therefore are not true exits. Still we choose to use exits of 2011 instead of 2010, for two reasons. First, because analysis using the real exits of 2010 gave similar results. Second, to show developments for as many years as possible.



As table 7.5.2 shows, there are again large differences between domestic and foreign controlled enterprises. On average the latter have higher employment, turnover, value added, imports and exports when they exit the market. Several variables show growth from 2007 to 2008, but almost all show a sometimes steep decline in subsequent years. One of the causes of declining performance was the economic crisis in which Dutch GDP contracted almost four percent in 2009.

### 7.5.2 Averages of key variables Dutch and foreign controlled enterprises, existing in 2007, exiting in 2011

	Unit	2007	2008	2009	2010	2011 <sup>1</sup>
<b>Dutch controlled</b>						
Employees		2.6	2.7	2.5	2.1	1.8
Turnover	<i>thousand Euro</i>	487	513	386	330	84
Imports	<i>thousand Euro</i>	54	63	59	60	26
Exports	<i>thousand Euro</i>	97	104	91	148	33
<b>Foreign controlled</b>						
Employees		25	26	24	16	13
Turnover	<i>thousand Euro</i>	11,844	11,585	8,282	7,061	2,457
Imports	<i>thousand Euro</i>	3,279	3,075	2,643	2,674	1,346
Exports	<i>thousand Euro</i>	4,494	4,171	3,387	3,309	2,040

<sup>1)</sup> The values of the variables in 2011 should be compared with those in previous years with caution, because the enterprises under concern do not exist during all months of this year.

The observed differences between Dutch and foreign controlled enterprises have many causes. For example, as already noted in paragraph 7.3, it is to be expected that size and sector of activity are such causes. Therefore, we matched exiting foreign controlled enterprises to similar Dutch controlled enterprises the same way we did for starters. Again, matching takes place on sector of activity, persons employed, turnover and trade status, all for 2010. We add the growth of turnover in 2009–2010 as a matching variable. The resulting group of 114 Dutch controlled enterprises has the same characteristics as the groups of foreign controlled enterprises. The two groups are followed through time to see whether they have different paths of decline.

### 7.5.3 Matching variables and reference period

Variable

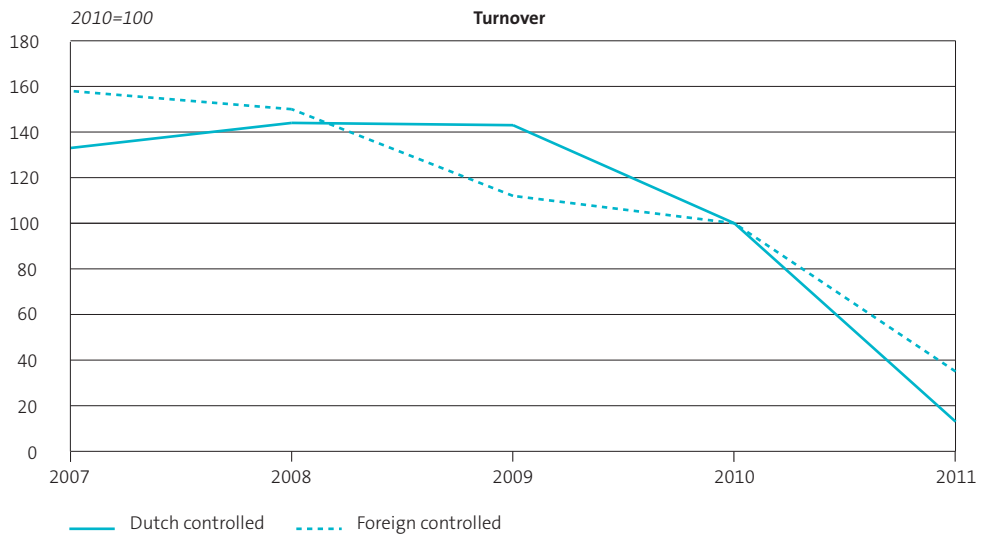
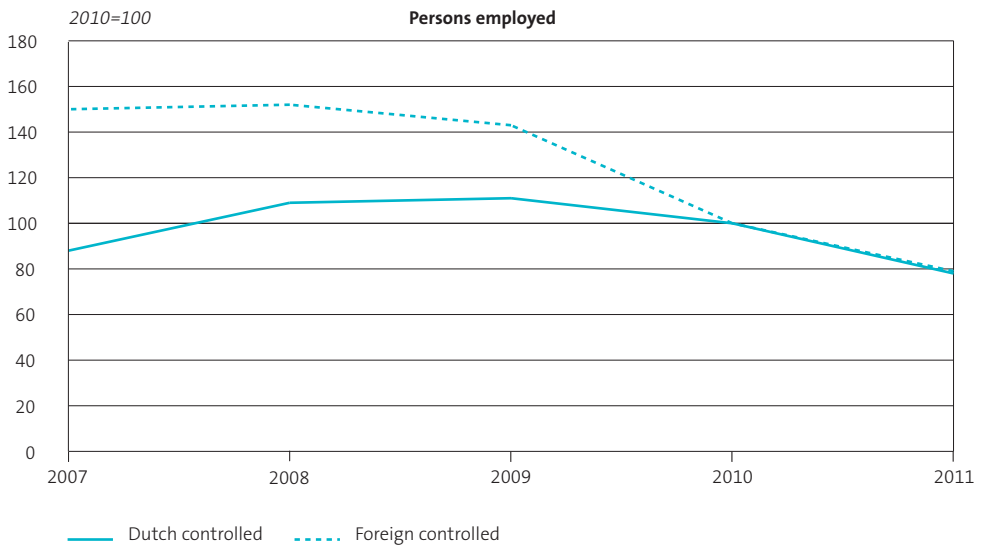
Sector of activity	2010
Persons employed	2010
Log (turnover)	2010
Turnover growth	2009–2010
Trade status	2010

### 7.5.4 Averages before and after matching, 2010

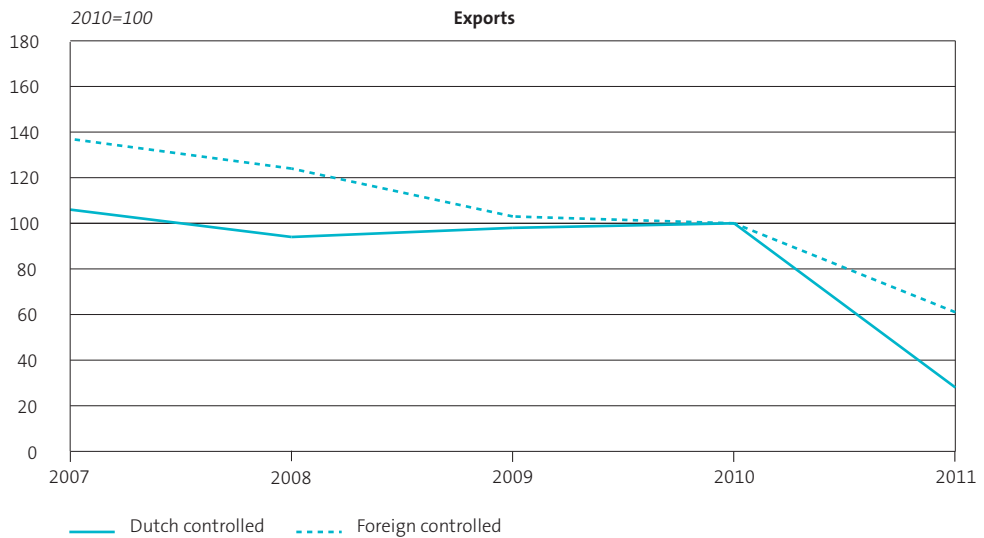
	Unit	All Dutch controlled enterprises	Matched Dutch controlled enterprises	Matched foreign controlled enterprises	Difference matched enterprises
Persons employed		2.5	14.2	18.5	-4.3 (-0.98)
Turnover	<i>thousand euro</i>	443	7,000	8,490	-1,490 (-1.08)
Exports	<i>thousand euro</i>	211	3,521	3,960	-439 (-0.27)
Number		9,693	114	114	

Z-score in brackets next to difference.

**7.5.5 Development of matched Dutch and foreign controlled firms, existing in 2007 and exiting in 2011**



### 7.5.5 Development of matched Dutch and foreign controlled firms, existing in 2007 and exiting in 2011 (end)



Graph 7.5.5 shows that the decline for all three variables starts earlier for foreign controlled enterprises. Furthermore, compared to the index year 2010, these enterprises lose more exports, turnover and employment than their Dutch counterparts. This is illustrated by table 7.5.6. Whereas the two groups of enterprises were matched in order to be similar in 2010, differences existed three years before exit. Employment was far higher at foreign controlled enterprises, and this difference proved to be statistically significant as well.

### 7.5.6 Averages for matched enterprises, 2007

	Unit	Matched Dutch controlled enterprises	Matched foreign controlled enterprises	Difference matched enterprises
Persons employed		12.5	27.6	-15.1 (-3.17***)
Turnover	<i>thousand euro</i>	9,282	13,381	-4,099 (-1.26)
Exports	<i>thousand euro</i>	3,733	5,416	-1,683 (-1.07)
N		114	114	

Z-score in brackets next to difference.

From these graphs one may conclude that it was no surprise that these foreign controlled enterprises would exit the market. As their turnover in 2010 was almost 40 percent lower than three years earlier, it is not surprising at all that they exited in 2011. However, fitting a good prediction model was not possible. There were more than 80,000 enterprises that experienced a similar fall of turnover, but still survived in 2011.

## 7.6 Discussion

The average starting foreign controlled enterprise is considerably larger than the average Dutch controlled starter. These differences remain four years after start-up and hold for employment, turnover and exports. However, these differences disappear for employment and turnover after matching foreign controlled enterprises to Dutch controlled enterprises with similar characteristics at the start. Foreign controlled starters only do better than their Dutch controlled counterparts in exports, but this difference was not statistically significant.

As far as exits are concerned, more employment, turnover and exports are lost at foreign than at domestic controlled enterprises that had the same characteristics four years before exit. However, only the difference in lost employment turned out to be statistically significant. Whereas average employment was similar in the year before exit, four years before exit the average foreign controlled exiter employed 28 people and its Dutch controlled counterpart 13.

It remains an open question whether it is possible to see in advance which firms will exit and which firms will not. During the economic crisis of 2009 it may have been related to exports and the international economy because the share of exports in total turnover is higher for foreign than for Dutch controlled enterprises. Due to this dependence on exports, they must be more vulnerable to shocks in the international economy. And as noted by Jaarsma (2011), in 2009 Dutch exports of goods were down 17 percent on the year before, whereas the Dutch economy contracted by four percent. The relation between exits, the international business cycle and exports should be studied together with other aspects. Such research is carried out at banks before they decide who to give credit and who not.

Research related to (the consequences of) births and exits of enterprises is a first step in the research programme of Statistics Netherlands on enterprise dynamics. In a next stage, mergers and acquisitions will be added. For example, what happens with employment, R&D, value added, productivity and other outcomes after a takeover? Urlings et al. (2011) showed that employment at a previously Dutch controlled enterprise is slightly higher two years after a foreign takeover. It is often mentioned in the literature (e.g. Djankov and Hoekman (2000), WIR (2012)) that a foreign takeover adds knowledge and network spillovers, thus contributing to productivity growth. But a takeover by a Dutch multinational would give such an impulse as well, and the question remains whether its effect is smaller, similar or larger.

Another strand in research is the combination of enterprise dynamics and regional information. The project Regional Economic Statistics (RES) at Statistics Netherlands already added much new regional information. And it is to be expected that birth, survival and performance are affected by specific regional characteristics. This implies that different regional stimulation policies for new entrepreneurs and existing enterprises are necessary instead of a “one size fits all” approach for the Netherlands as a whole.