

8.

**Regional differences
in economic
performance
in the context of the
financial crisis**

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Macroeconomic developments can mask heterogeneity between enterprises or regions within a country. At the macroeconomic level the Dutch business economy seemed to have found its way out of the crisis of 2009, but the developments at the micro level show that the revival is not broad-based. Growth in international trade and turnover after 2009 is mainly carried by a small group of large (two-way) traders while the average firm has not yet recovered. Likewise, there are regions in the Netherlands that suffered more from the crisis than others. In general, provinces in the south of the Netherlands were hit the hardest by the crisis while Groningen and Flevoland fared best. To determine whether region had a specific impact on turnover development, we tested an ANOVA model where we combined enterprise characteristics and region. We found that location has a small but significant influence on turnover growth. Firms in Zeeland had a greater positive turnover growth between 2007 and 2012 than comparable firms the other provinces while firms in Noord-Holland and Utrecht had the largest loss in turnover all else being equal.

8.1 Introduction

In the past five years the Dutch economy was on a roller coaster ride. Real GDP reached its highest point in 2008 but contracted severely due to the global financial crisis that started later that year. The Dutch international trade in commodities collapsed and decreased by almost 20 percent in the following year. In 2010, the dust settled somewhat on the financial markets and trade bounced back with almost similar growth rates. Unfortunately the European economy was plunged into a new crisis by the euro debt crisis. On top of that the Netherlands was faced with uncertainty on the housing market, and all-time low consumer confidence levels combined with unrest about private wealth (e.g. pensions, social security and health care). The Dutch economy buckled under the pressure. As of the third quarter of 2012 the Dutch GDP volume continues to decrease compared to the previous quarter.

These macroeconomic facts and figures paint a turbulent picture, for the Netherlands as well as for many other EU countries. On closer inspection there is a lot of heterogeneity in terms of the impact of the crisis and recovery between countries (Groot et al, 2011; Lane and Milesi-Feretti, 2010). This raises the question whether the macroeconomic developments also mask heterogeneity between different enterprises and regions within the country. Do all enterprises suffer equally from the crisis? Are there regions in the Netherlands that suffered more

than others during the financial crisis, and vice versa, recovered better than others? This is similar to chapter 9 of last year's edition of the Internationalisation Monitor that studied enterprise dynamics during the financial crisis (Statistics Netherlands, 2012b). But this year we will shift our focus to two main questions: How did the crisis develop in 2012 and is the course of the crisis as heterogenic as we assumed last year? And how did the different regions fare between 2007 and 2012?

Section 8.2 starts with an overview of the resources that were used to construct the dataset on which the analyses in this chapter are based. We then continue by updating last years macroeconomic overview adding GDP and the 2012 data on turnover, international trade and jobs. By comparing the macro figures to median growth figures we can determine to what extent the overall developments resonate with the microeconomic practice. This is one of the major contributions of this chapter: by using an approach at the enterprise level it is much closer to the everyday perception of the economy. In section 8.4 the regional developments in terms of turnover growth are presented for four time periods, namely the pre-crisis years, the crisis, the recovery years and the double dip. We also investigate whether these findings hold for the average local firm as well. In section 8.5 all variables (region, international trade, foreign control, size and sector) are combined in an ANOVA to explain turnover developments. This also conclusively shows whether location has a separate and significant impact on turnover growth. The chapter concludes with a summary of the main findings.

8.2 Data and methodology

Construction of the dataset

A broad dataset was created allowing insight into the dynamics of the crisis. The starting point of this dataset is the General Business Register for the years 2007–2012. To this data we matched additional information from the international trade in goods statistics, data on turnover as obtained from the Dutch tax authorities, number of jobs per enterprise from the Linked Employer-Employee Database (LEED), data on foreign ownership from the Foreign Affiliate Statistics (FATS) and the breakdown of the enterprise to its local units. Our analysis will include five enterprise characteristics: location (province), economic activity of the enterprise, ultimate controlling institute, international trade status and the number of employees.

Economic activity is a variable from the General Business Register and is clustered in the same way as described in section 7.2. Disaggregating enterprises to the level of local business units provides information on the geographical location of an establishment. Locus of control is determined based on the location of the ultimate controlling institute (UCI) of an enterprise, which is the product of the FATS. In this chapter only 2 categories of ownership are used, namely Dutch versus foreign controlled. Unfortunately the sources of the UCI are not comprehensive and if no information is available Dutch ownership is assumed. Since the quality of the UCI variable has improved, some enterprises switch from Dutch to foreign ownership over time, not due to a merger or acquisition but due to improved sources. Since these are not real changes we decided to update earlier years with the improved information. Ownership can still change from foreign to domestic controlled or vice versa due to mergers and acquisitions. For 2012, a preliminary locus of control was created mainly based on the 2011 FATS.

Information on jobs per enterprise is obtained from the LEED database. Jobs are assumed to be exhaustive. If there is no information the enterprise employs only the owner. The LEED database provides data up to 2011. Since the other data in this chapter does contain 2012, a preliminary jobs figure was created for 2012 based on crude source material.

The international trade status of an enterprise is derived from the international trade statistics and is grouped in four categories: non-trader, importer only, exporter only and two-way trader. Two-way traders are often large and generate large amounts of turnover. But some enterprises are two-way traders one year, importers the year after and non-traders the year after that. Since most analyses in this chapter follow clusters of enterprises over several years it is important that all characteristics are constructed similarly. In an effort to improve similarity and comparability over time, the decision was made to compose one status for all years for sector of activity and international trade. By creating one international trade status we can look at the dynamics of the target variable instead of looking at the dynamics of international traders. We decided to prefer the most complicated international trade activity over the years (1) two-way trade, (2) export only, (3) import only, (4) non-trader. So an enterprise is a non-trader if no trade activities were found for the 2007–2012 period.

Many changes in sector of activity for enterprises are due to administrative changes rather than changes in activity. Deciding on one sector of activity per enterprise (the sector of activity in 2012 or last year before termination) bypasses those administrative changes and improves the comparability between years.

Linking the information on jobs and trade resulted in a dataset of 2,238,077 enterprises for the 2007–2012 period. All the analyses in this chapter exclude the government, education and health care sector. As such they are based on enterprises in the private sector (NACE Rev. 2 section B to N, excluding K). The

remaining dataset on jobs and trade contains 1,498,815 of those enterprises for the six year time period with an average of 896,929 active enterprises per year.

International trade and turnover, which are collected on VAT ID-number, are notoriously difficult to link to enterprises in the General Business Register. Having no international trade value for an enterprise could be due to a linking problem. Since there is no way of determining which of the missing values are due to linking problems, and the fact that for almost all enterprises in the business economy their international trade value is linked, we will treat the international trade data as if it is exhaustive.

For turnover, considerations are different. All enterprises in the General Business Register should have turnover. No turnover generally indicates a linking problem. Analyses on turnover therefore can only be successfully done when considering a panel of enterprises with turnover for each year of its existence. This restriction results in a panel consisting of 362,668 enterprises that existed between 2007 and 2012 and reported turnover for each year. By excluding the births and deaths this dataset can be used for our descriptive analyses as well as our in depth ANOVA analyses. Although this approach creates some bias by excluding dynamics of entry and exit, it does not change the general picture.

Analysis

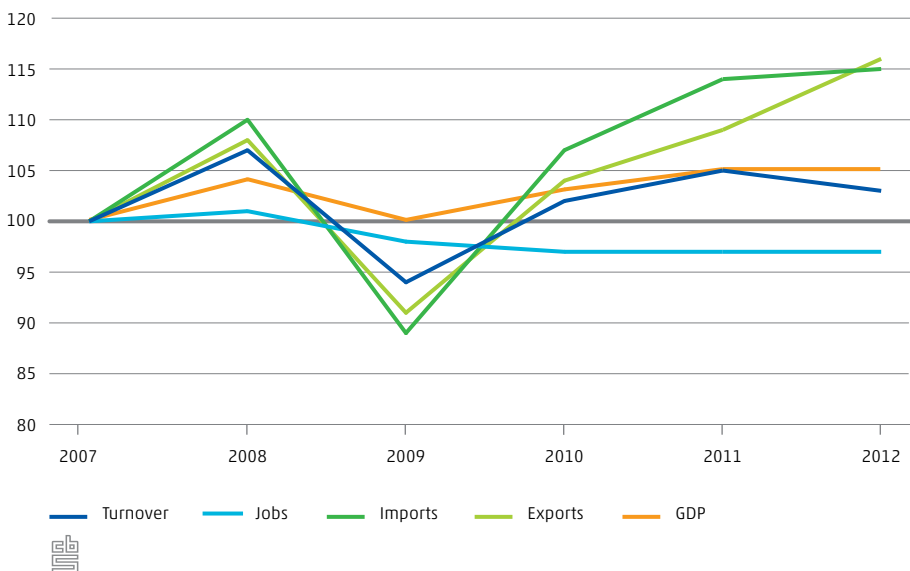
In all analyses a total of 15 enterprises were excluded as they distorted the figures with dynamics caused by linking problems. For each of the ANOVA analyses half a percent of outliers was excluded.

8.3 Overall dynamics during the financial crisis

Echoing last year's chapter (Statistics Netherlands, 2012b), our analysis of the regional differences during the financial crisis starts by looking at the overall picture of the crisis. Figure 8.3.1 shows the growth (or decline) between 2007 and 2012 of the jobs, international trade value (divided into import and export value), turnover and GDP. In 2012 we concluded that the crisis hit the economy of the Netherlands hard in 2009. In the space of one year enterprises in the Dutch business economy saw their turnover decline by 11 percent, their exports

by 16 percent and their import value by 19 percent. For the first time since 1982 the year-on-year GDP volume did not grow, but decreased by over 3 percent. In the next two years turnover, international trade values and GDP recovered almost as fast and extensively as the downfall was for 2009. The jobs in the business economy show a different dynamic. The 2009 decrease is the smallest of all variables under concern. This may be due to enterprises trying to keep their valuable personnel, in the hope of a quick recovery of the economy, as well as the cost involved in letting people go (De Jong, 2012). But there was no recovery from the crisis.

8.3.1 Indexed turnover, jobs, imports, exports and GDP (in market prices), 2007 = 100



Adding 2012 to the overall picture instantly makes the feeling of a steady recovery falter, as the Dutch economy went into another recession. Although import and export values still increased, turnover and GDP accompany jobs in the downward trend. The “double dip” as it is labeled by policy makers and media alike seems apparent and there are no signs yet of a quick recovery. Taking this into consideration a complex image looms. International trade, turnover and GDP are closely linked as the trading surplus makes up 8 percent of the GDP and over 80 percent of turnover in the business economy is on behalf of trading enterprises. How come international trade (and especially exports) is flourishing while turnover and GDP decrease?

Median growth

We start by taking a closer look at crisis recovery. For 2010 and 2011 it seems most enterprises had their things back in order. But a closer look at our panel in table 8.3.2 sheds a different light. Instead of looking at the total value, we want to highlight the median year-on-year growth for turnover, jobs, import value and export value. Although the total value of turnover, imports and exports grew from 2009 on (which was shown in 8.3.1), in fact more than 50 percent of the enterprises in our panel, which consists of close to 900,000 enterprises a year, have a negative year-on-year turnover and trade growth from 2008 on. To be precise over 60 percent of the traders had a decrease in trade value in 2010 compared to 2009. This is an even larger share than in the previous crisis year when "only" 57 percent had a fall in import value and 58 percent of traders saw a decrease in export value.

How does this fit in with the indexed value growth of 8.3.1? The main answer is that there is a small group of large enterprises that were hit hard by the crisis, but recuperated at nearly the same rate. In fact, excluding the top 1 percent enterprises from the turnover, import value and export value completely eliminates the 2010 recovery. After 2010 international trade value stabilizes at about a 20 percent loss in value for the median enterprise!

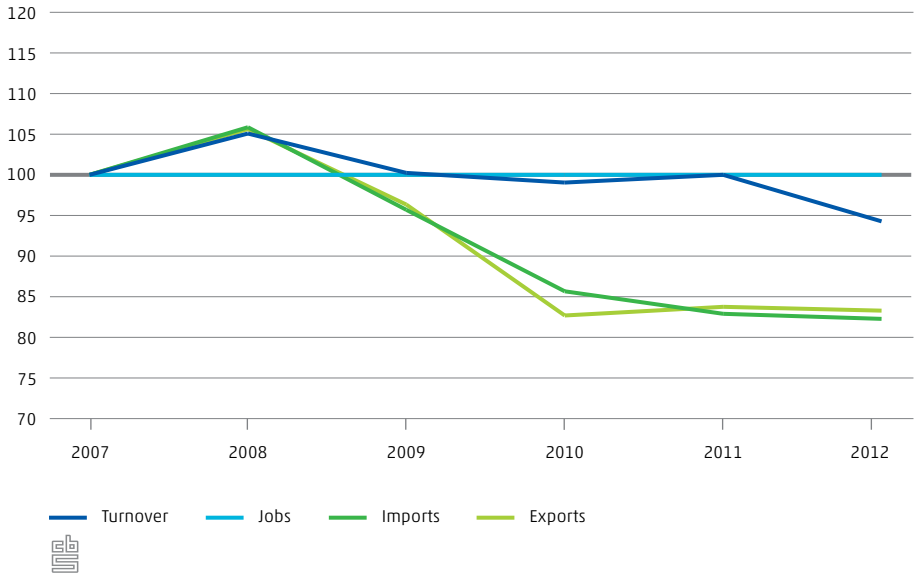
8.3.2 Share of enterprises with diminishing turnover, imports or exports

	2008	2009	2010	2011	2012
	%				
Turnover	39	57	50	46	58
Imports	45	58	59	53	53
Exports	45	57	60	50	51

Graph 8.3.3 shows the median growth in turnover, jobs and trade for our panel of enterprises in the business economy. By 2010, the median enterprise had lost about 20 percent of its trade value and this has not improved since. Turnover development for the median enterprise shows a different pattern than the international trade value. The 2009 dip is extensive for many enterprises but not nearly as large as for their trade value. That year the median enterprise lost over 4 percent of its turnover and 57 percent of the enterprises in our panel lost at least some of their turnover. Complying with 8.3.1 turnover growth is much more influenced by the "double dip" in 2012 than international trade growth.

The 2012 decrease in turnover of the enterprises in our panel just trumps the 2009 dip. The median decrease in 2012 was 5.2 percent and roughly 58 percent of the panel lost turnover between 2011 and 2012.

8.3.3 Developments of turnover, jobs, imports and exports based on median growth, 2007 = 100



The most apparent difference between the macroeconomic developments and those at the micro level is in the pattern of the international trade values. As the value recuperates fully and international trade seems to be one the few redeeming feature of the crisis, the median growth paints an entirely different picture.

From 2008 to 2010 the median exporting and/or importing enterprise lost over 10 percent of its trade value two years in a row. In 2009 the median dip was a little smaller than the absolute one. But in 2010 the total trade value increased by well over 10 percent even though the median dropped over 10 percent. Taking all this into account it is apparent that not all traders are the same. Excluding the top 10 exporters halves the export growth in figure 8.3.1, excluding the top 65 (less than 1 in 650 exporting enterprises) completely obliterates the growth. The revival of the export value (and imports alike) is therefore not due to a hugely positive trend in trading, but to a few very large and very influential enterprises that saw their trade value bounce back almost instantly in 2010. For most enterprises their import and export values did not recuperate.

For turnover it stands out that the enormous 2009 dip and the 2010 recovery are not apparent in 8.3.3. The dip and recovery turn out to be caused by a small

number of large enterprises (less than 0.03 percent of our panels population). These enterprises saw their trade value and turnover recuperate due to the recovery in foreign demand. Smaller and less international enterprises that are linked more to domestic demand continued to suffer as consumption remains low.

It might be an unexpected finding that median job growth is stable. This can be explained as follows: the large majority of enterprises employ less than 3 people, hence firing somebody means downsizing the workforce by at least a third. In practice, it is often impossible to continue the same business with such small staff. These enterprises may cut working hours but not the number of people they employ. So although unemployment rises, still close to 65 percent of all enterprises employ the same number of people in each year, and year-on-year only 20 percent of the enterprises have a change in the number of employees. Graph 8.3.1 showed that at the macro level the number of jobs at enterprises in our panel decrease but at the micro level we see that for the median firm the number of jobs is stable. Approximately the number of enterprises that see their jobs increase is about the same as the number that see the jobs decrease. This implies that the average growing enterprise grew less than the average shrinking enterprise shrank.

On a macroeconomic level the business economy seems to have found its way out of the crisis in 2010 and 2011. However, considering the patterns at a micro level, the revival is not broad-based. Already in 2011 household consumption and government investment turned negative again which impacted on economic growth. As such, the 2012 double dip in the turnover and GDP looks a lot less out of place in this perspective. After the initial 2009 blow to the economy most enterprises did not recover. The international trade values did flourish at the macro level, but only a few enterprises benefit from this recovery. And when in 2012 overall investment and consumption bottomed out, the modest international trade growth was no longer enough to compensate. Chapter 1, table 2.4 shows that the recession deepened in the first quarter of 2013, mainly due to the fact that international trade is stagnating while public and private consumption as well as investments contracted even further.

Type of trade

Since the median enterprise had 5 percent less turnover and over 20 percent less import and export value in 2012 than in 2007, last year's results that being a trader sees you better through the crisis seems contradictory. Figure 8.3.4, the median turnover growth for type of international trade, provides insight in how these two findings accompany each other. As most enterprises are non-traders

the median turnover growth for non-traders mirrors the overall median growth as seen in 8.3.3. Similar to our findings last year, international traders and specifically exporters and two-way traders have the best recovery. However, two-way traders are the only group with median turnover growth from 2007 to 2012, which makes them have the best overall outcome. Interestingly figure 8.3.4 also shows that enterprises that only import and non-traders are actually quite alike in terms of turnover growth (see also chapter B2 in Statistics Netherlands, 2011a). The median non-trader and the median enterprise with only imports both experienced a more or less steady decline of turnover from 2009 on and have lost over 5 percent of turnover by 2012. Enterprises that only export mimic the pattern of two-way traders but the median turnover growth is far less than that of the median two-way trader since 2009.

8.3.4 Developments of median turnover growth by type of trade, 2007 = 100



8.4 Regional impact of the financial crisis

The previous section shows that the macroeconomic pattern can diverge substantially from the situation at the micro level. Building on the overall pictures of the crisis, we wonder if the crisis had the same effects on the different regions of the Netherlands. More specifically, are there differences between provinces in the impact of the crisis on the local economy? How well did the local economy recover? And what was the overall outcome between 2007 and 2012. Keeping the findings of the previous paragraph in mind we will start by describing the differences in values and subsequently look at the median development. We discuss both scenarios because they have different implications. The macro approach (looking at the total values) resembles economic growth and benchmark values of the Netherlands used by policy makers. Whereas the more micro approach (in our case the median growth) sheds light on the level of crisis penetration on the enterprise level and is closer to the everyday perception of the economy.

Economic crisis at the macro level

To shed some light on the regional difference during the crisis figure 8.4.2 shows the turnover changes for the pre-crisis (2007–2008), crisis (2008–2009), recovery (2009–2011) and double dip years (2011–2012). First of all it stands out that turnover increased for all provinces in the pre-crisis and recovery years. Contrariwise the crisis spared no province and all turnover growth was negative. This is the same for the imports and exports (not shown) although the losses and gains are far larger. The losses in Zeeland during the crisis of 43 percent of export value and 46 percent of import value were immensely larger than the “mere” 14 percent of turnover lost. In the recovery Zeeland’s trade also recovers with large numbers, contrary to Zuid-Holland that lost minimal imports and exports with respectively 18 and 10 percent, but also recovered with close to the same percentages as Zeeland, 47 and 24 percent growth of Zuid-Holland’s import and exports versus 58 and 34 percent for Zeeland. Looking only at the international trade in goods, Zuid-Holland shows by far the best recovery of all provinces.

Moving back to the turnover analysis in 8.4.2. The south of the Netherlands was hurt the most in 2009 with an average turnover decrease of 13 percent versus 8.5 percent in the rest of the Netherlands. Groningen and Flevoland fared best with a turnover decrease of approximately 7 percent.

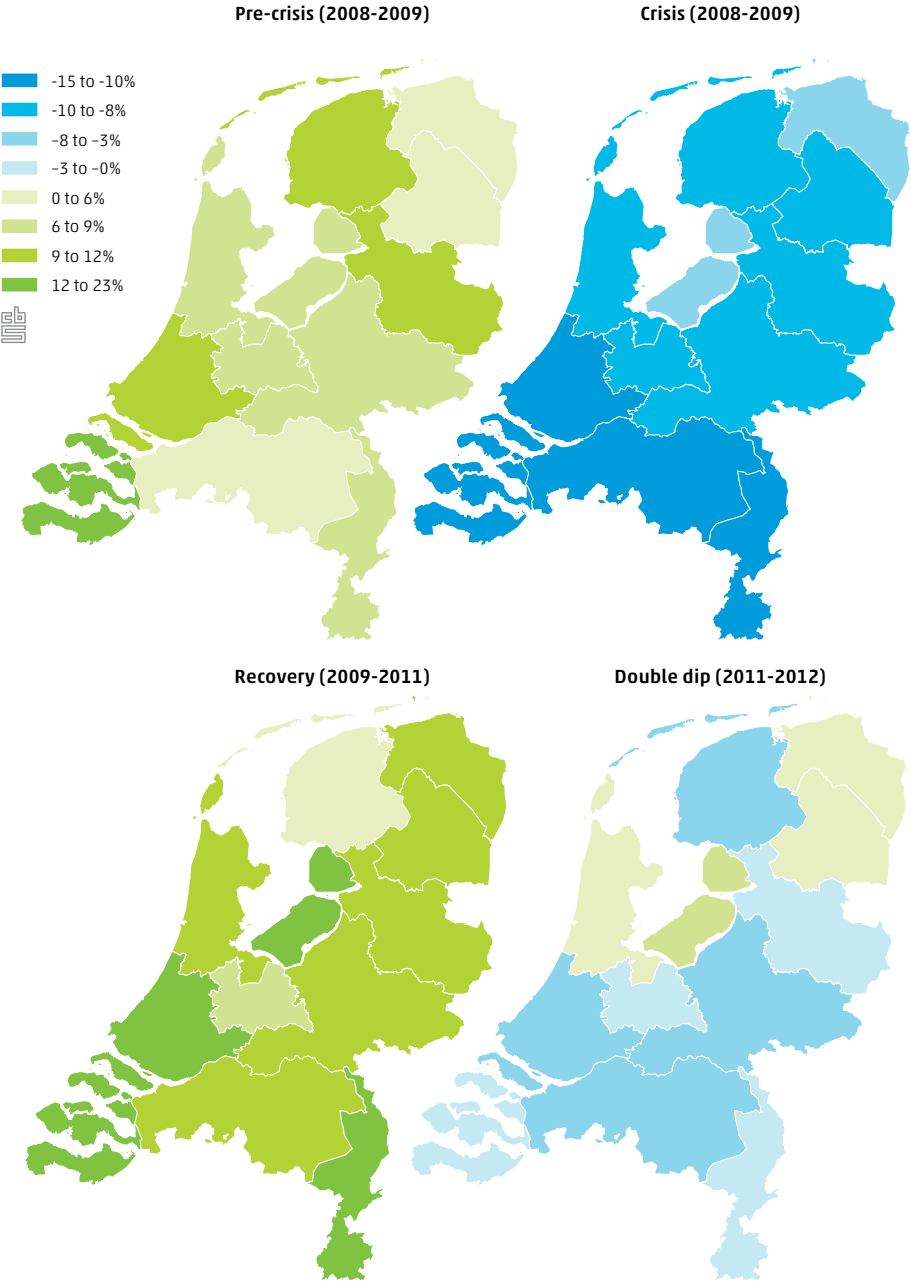
Although in the first three charts turnover growth of all provinces moves uniformly, the double dip (2011–2012) chart is different. Most provinces see their turnover decrease except for Noord-Holland, Groningen, Drenthe en Flevoland. These provinces also had a relatively small decrease in turnover in 2009 which indicates that they might be better equipped to handle turbulences in the economy. In a study on the resilience of Dutch regions to economic shocks, Diodato and Weterings (2012) find similar results. They argue that when a province has a large portion of the supply chain located in its territory (i.e. an 'embedded' region), it is less vulnerable to external shocks in demand (measured as a decrease in output). Examples of such embedded regions are Utrecht and Noord-Holland. The opposite holds true for export-oriented regions. These regions are more manufacturing oriented and very vulnerable to worldwide shocks. This explains why manufacturing regions, such as Noord-Brabant or Limburg, absorb the shock least successfully. Similar results are found by Groot et al. (2011). They concur with our finding that Groningen is relatively insensitive to the business cycle. For more information on value chains and economic growth in the region see chapter 7.

This is also apparent in 8.4.1 which shows per time slot the province with the best and worst turnover growth. It turns out that the best and worst performers pre-crisis switch places in 2009. Zeeland had by far the largest turnover growth in 2008, over 20 percent, but also lost the most in 2009 (14 percent). Groningen only gained 4.8 percent for 2008, but also only lost 7 percent. As Zeeland still saw turnover grow by close to 10 percent from 2007 to 2009, they are a good candidate for the best overall growth. They only miss the gold by inches due to a very good performance of Flevoland during the recovery and double dip years, as they both had 23 percent more turnover in 2012 than in 2007. On the other hand, the less fortunate provinces are headed by Noord-Brabant, with a 1 percent lost in six years. Since 2007 Noord-Brabant has struggled through the years: A relatively small pre-crisis growth, a big loss in the crisis, a median recovery and another significant loss suffered between 2011 and 2012. Noord-Brabant is closely followed by Friesland, gaining 2 percent overall, losing 8 percent in the last year.

8.4.1 Provinces with best and worst macro outcome per period

	Best	Worst
Pre-crisis (2007–2008)	Zeeland	Groningen
Crisis (2008–2009)	Groningen	Zeeland
Recovery(2009–2011)	Zeeland	Friesland
Double dip (2011–2012)	Flevoland	Noord-Brabant
Overall (2007–2012)	Flevoland	Noord-Brabant

8.4.2 Turnover growth per province for the pre-crisis, crisis, recovery and double dip years



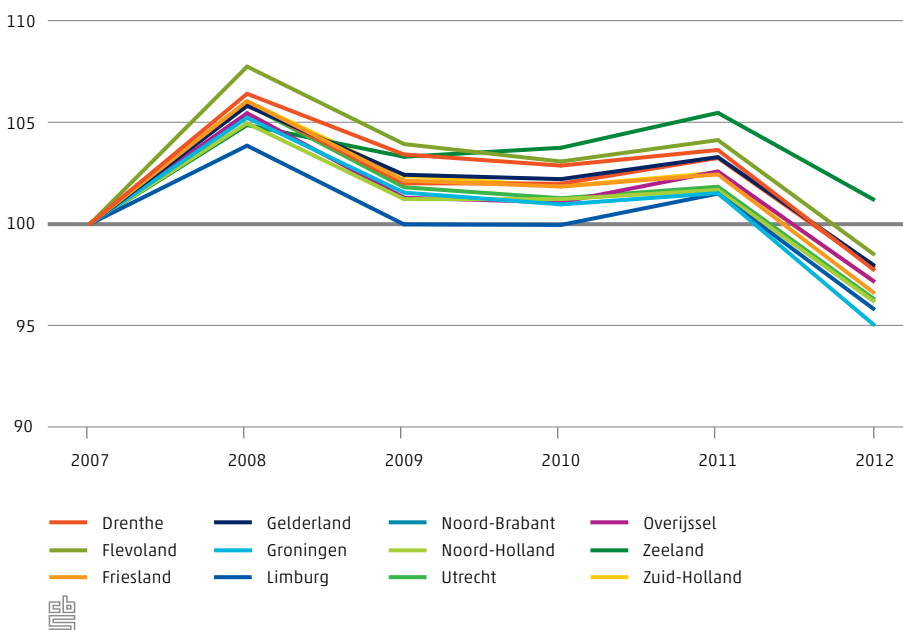
Economic crisis at the micro level

In this section we illustrate how the crisis, recovery and subsequent recession of 2012 impacted on the turnover of the median firm in each province. The median year-on-year turnover growth seems relatively stable (8.4.2). None the less some trends stand out. Zeeland and Flevoland have the best outcome as 8.4.1 shows. But interestingly the median firm in Zeeland doesn't start out strong.

The median firm in Groningen is an average performer but loses the most in the double dip and ends up at the bottom. The macro analyses in Groningen is of course very distorted due to the large influence of the natural gas extraction. Interestingly Limburg performs a lot worse when we look at the median firm, especially in the crisis and recovery years. The total turnover has been influenced greatly by a couple larger enterprises, but at the micro level most enterprises perform below average.

Noord-Brabant was the province with the worst overall performance in terms of turnover growth between 2007 and 2012. This picture is in accordance with 8.4.3, which also shows that the median growth was one of the lowest of all twelve provinces.

8.4.3 Median year-on-year turnover growth per province, 2007=100



8.5 Statistical analysis

In the previous paragraphs we showed that the overall economic developments since 2007 had a very different impact on individual regions in the Netherlands. In addition, most enterprises still experience the negative fallout of the crisis, which goes undetected if we only look at the macro growth figures. In this section, we combined enterprise characteristics and regional characteristics with internationalisation traits in order to determine which characteristic has the largest impact on turnover development (of: whether region *ceteris paribus* has an impact on turnover development). Looking at the ANOVA model in 8.5.1 we can definitively say that location, in this case province, is connected to the turnover growth. The associated F-value for location, however, is small. This means that the difference in turnover growth¹⁾ between enterprises is only explained for a very small part by the province where they are located. The sector, type of trade and the number of employees have a much greater influence on the individual differences in turnover growth than location. That being said, location has statistical relevance for each year under review. As could be expected correcting for sector, type of trade, ownership and jobs mixes up the previous results somewhat, but not the general outcome. In both the analysis of the absolute value and of the median growth one province continuously stood out, Zeeland. Zeeland has a greater positive turnover growth from 2008 on than any of the other provinces and this is confirmed by the ANOVA model. As the ANOVA is a micro analysis, the results can best be compared to figure 8.4.3, the median growth. The four lowest province are the same: Groningen, Limburg, Noord-Holland and Utrecht. But correcting the turnover growth for sector, type of trade, ownership and jobs changes the overall outcome. Groningen and Limburg had the largest median decrease in turnover, but after correction Noord-Holland and Utrecht both have a larger loss of turnover from 2007 on. Another interesting change is the position of Flevoland. Flevoland has the largest 2007–2008 turnover growth in both analysis. But decrease of turnover between 2008 and 2012 is smaller for the median than for the corrected turnover.

For the other independent variables it stands out that two-way traders outperformed non-traders, importers and exporters for each year except for the 2008–2009 decrease as the crisis hit, when only importers saw an 8.3 percent dip in turnover versus 9.3 for two-way traders between 2008 and 2009. This concurs with the median growth per type of trade (8.3.4). Two-way traders and partially

¹⁾ Turnover growth is included in the analyses as a natural log and has been calculated back to the turnover growth for 8.5.1.

export-only enterprises performed well on a whole and for most years better than only importers and non-traders, but in 2009 they were hit harder as well. Also, each year enterprises under foreign ownership have a higher corrected turnover growth (or shrank less) than Dutch controlled enterprises. In fact, turnover at Dutch controlled firms has not grown in four years and 2012 shows a decline as large as in 2009. Combining these two findings affirms last year's conclusions. Internationalisation, even when controlled for location, is positively related to turnover growth and these enterprises are better able to keep their turnover up during the crisis.

Sector-wise most patterns are quite similar to last year's model, when we did not control for location. But adding 2012 does bring some interesting insights. The construction sector was looking up in 2011 after years of decline. The corrected year-on-year growth was the highest of all sectors with 5.6 percent. The government stepping up infrastructure programmes is an explanation for this deferred contraction in turnover (Statistics Netherlands, 2013c). Unfortunately the 2012 double dip, the restricted rules for mortgage lending and the continuing uncertainty on the housing market hit the construction harder than any other sector. Although all sectors saw their turnover decrease, the loss of 12.6 percent in construction stands out. The transport sector on the hand shows a very different picture. Having the second largest corrected turnover growth right behind the construction in 2011, the turnover in transport had the smallest decrease of all sectors in 2012.



**Noord-Holland and Utrecht saw
the largest loss in turnover after the crisis**

8.5.1 Year on year (corrected) mean turnover growth

	2008	2009	2010	2011	2012	2007–2012
	%					
Province						
Drenthe	16.7	-8.9	1.6	0.5	-8.6	-1.8
Flevoland	17.6	-9.8	0.4	-0.7	-8.2	-2.9
Friesland	15.7	-9.6	1.8	0.3	-7.8	-3.4
Gelderland	14.9	-9.3	2.0	1.1	-8.0	-2.7
Groningen	14.5	-10.1	2.2	0.8	-9.3	-4.8
Limburg	12.1	-10.0	2.3	1.7	-8.6	-4.5
Noord-Brabant	15.1	-10.1	1.9	1.2	-7.7	-2.8
Noord-Holland	13.2	-11.0	2.4	0.1	-8.3	-6.1
Overijssel	15.2	-10.0	2.5	1.9	-8.2	-2.1
Utrecht	14.7	-10.8	1.8	0.5	-7.9	-5.2
Zeeland	13.0	-7.5	2.8	1.8	-7.1	-0.7
Zuid-Holland	15.5	-9.8	1.2	0.6	-7.7	-3.9
Sector of activity						
Manufacturing	14.2	-10.6	1.0	1.3	-7.2	-4.6
Construction	19.1	-9.1	-2.0	5.6	-12.6	-5.2
Wholesale trade	10.2	-11.1	1.6	-1.7	-9.0	-10.1
Transport and storage	16.3	-14.6	8.4	4.2	-5.6	4.4
Retail trade and hotels and restaurants	12.4	-3.9	2.6	-1.0	-6.0	1.1
Services	17.2	-8.8	0.2	-3.1	-8.3	-5.4
Type of trade						
Non trader	11.7	-9.7	-1.6	-1.1	-9.1	-9.8
Importer only	15.5	-8.3	0.4	-0.5	-9.1	-4.9
Exporter only	14.1	-11.6	3.4	2.1	-7.4	-2.6
Two-way trader	18.1	-9.3	5.6	2.8	-6.9	4.1
Ownership						
Dutch	12.2	-9.8	-0.1	-0.1	-9.9	-9.6
Foreign	17.5	-9.7	4.0	1.7	-6.4	3.2
	F-value					
Corrected Model	107***	72***	84***	87***	69***	64***
Intercept	1192***	621***	32***	2	476***	8**
Province	11***	7***	3***	4***	2*	7***
Sector	123***	239***	119***	285***	141***	94***
Type of trade	122***	25***	233***	76***	26***	220***
Ownership	31***	0	31***	6*	24***	73***
Employees	1196***	40***	50***	36***	186***	158***

The asterisks ***, ** and * indicate significance at the 1, 5 and 10 percent level.

8.6 Conclusion

Even though the macro-economic outlook for the Netherlands looked promising in 2010 and 2011, it hid a lot of problems at the micro level. The growth in trade and turnover after the economic crisis of 2009 is mainly carried by a small group of large (two-way) traders that were able to reap the benefits of renewed global trade growth. The median firm, however, has not yet recovered from the crash in 2009. Almost 60 percent of the panel under consideration lost trade and turnover in 2009. In fact, as of 2012, their performance only worsened. Turnover of the median firm decreased even stronger in 2012 than in 2009 and again 60 percent of the panel lost turnover in the new recession. Employment is relatively stable for our panel of enterprises as 65 percent employ the same number of employees from year to year. However, the median firm is still struggling to recover its lost turnover and trade. So it is not surprising that when international trade growth slumped in 2012 and investment and consumption contracted again, the economy went into another recession.

Since the overall macroeconomic figures can differ substantially from the situation at the micro level, we also expected to find significant differences in regional performance during the past five years. We found that provinces in the south of the Netherlands were generally hit the hardest by the crisis while Groningen and Flevoland fared best. At the time of the double dip most provinces saw their turnover decrease again, except for Noord-Holland, Groningen, Drenthe en Flevoland. Due to their specific traits, these provinces might be relatively well equipped to handle shocks to the economy. In fact, Flevoland is the province with the best overall performance in terms of turnover between 2007 and 2012. When we look at turnover growth for the median firm per province, the picture changes somewhat. In this case, Flevoland is surpassed by Zeeland, as the median turnover growth there decreased less. As such, in Zeeland the decrease in turnover is spread more evenly over the firm population than in other regions.

To determine whether region had a specific impact on turnover development, we tested an ANOVA model where we combined enterprise characteristics such as size and sector, internationalisation traits, namely trade and foreign control, and lastly region. We found that location has a small but significant influence on turnover growth. When we control for sector, size, trader type and foreign control, firms in Zeeland had a greater positive turnover growth between 2007 and 2012 than comparable firms in the other provinces. Alternatively, after correction firms in Noord-Holland and Utrecht had, all things being equal, the largest loss in turnover. The ANOVA model also shows that two-way traders outperform non-

traders, importers and exporters in terms of turnover growth for each year except between 2008 and 2009, when they were hit harder by the financial crisis than the other traders and non-traders. This is not surprising: international trade fared far worse than spending by consumers or enterprises in the Netherlands, and this is reflected in the performance of traders and non-traders. Enterprises under foreign control have a higher corrected turnover growth (or shrank less) for each year than do Dutch controlled enterprises. Combining these two findings affirm last year's conclusions. Internationalisation, even when controlled for location, is positively related to turnover growth and these enterprises are better able to keep their turnover up during the crisis.