The importance of craftsmanship

The economic potential of the midtech sector for the inhabitants of Rotterdam- South

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Management summary

Cities consist of various areas, prospering areas but also areas that are in distress. The current Dutch approach is to improve these distressed areas by focusing on the aspirations of the people living in these areas. It is believed people wish to advance in life and get out of the negative spiral of decline. To get out of the negative spiral of decline they have to start climbing the social ladder. This can be via different routes. The work route is one of these. The “Ik zit op Zuid” project thought the midtech sector might provide opportunities for the young inhabitants of Rotterdam- South to start climbing the social ladder via the work route.

Local economic development projects try to improve these distressed areas and aim to get people on the work route. Many local economic development projects aim at changing the skills of the inhabitants by focusing on the supply side of the labor market. This often results in an oversupply in the labor market. Demand side approaches traditionally target industries or sectors. Occupational- industrial targeting is however another demand side approach which can target more specifically for an area. This research illustrates the usage of the occupational- industrial approach for an area in distress. It is discussed that when using this approach in an area in distress some conditions have to be satisfied before the occupational – industrial approach can achieve its best result. The conditions that are mentioned are adequate human capital, adequate mobility levels, adequate social capital, reduction of substance abuse and reduction of crime. The research focuses on the midtech sector in the Rotterdam- South area. The research question central in this research is:

What is the economic potential of the midtech sector in the Rotterdam region and is the potential workforce in Rotterdam- South able to make use of the economic potential in the future?

It can be concluded that the midtech sector has economic potential for the Rotterdam region and for the inhabitants of Rotterdam- South. However the inhabitants will only be able to make use of this potential if some conditions are satisfied that currently obstruct their employability.

The midtech sector has economic potential because of several reasons. First, a large cluster of firms is present that operates regionally and internationally which requires high value craftsmanship. Secondly, many firms in the midtech sector have entered a niche market in which they can innovate and acquire a world leading position in this niche. Thirdly, a lot of subcontracting between the midtech cluster and the petrochemical cluster is present. The petrochemical cluster is important for the City of Rotterdam for its additional value. The

midtech cluster is able to strengthen the petrochemical cluster, which increases the importance of the midtech cluster. These three factors increase the competitive position of the midtech sector. As a consequence of this strong competitive position the midtech sector in Rotterdam will not be easily outsourced in the near future. This is a fourth reason why the midtech sector has economic potential.

The economic potential is however threatened by a very acute problem. The biggest strength of the midtech sector, the craftsmen with a lot of knowledge acquired through the years that characterize the sector, will retire the coming years. Not enough youngsters are currently in technical education to fill this gap. Without the qualified craftsman the midtech cluster loses one of its competitive advantages and is at risk of being outsourced. In addition, if no Dutch craftsmen are present to fill the vacancies, foreign workers will be hired. As a consequence the Dutch knowledge will be transfered to other countries, with a risk of declining quality in the Netherlands.

The potential for the inhabitants of Rotterdam- South is large. They are in a position to fill the vacancies of the retired personnel, because most jobs in the midtech sector in Rotterdam can be found in the near vicinity of the Pact op Zuid area. This gives the inhabitants a good starting position, because they tend to have a lower job search area and a lower area of reach. Moreover many firms wish to hire people from the region and see the region as a large potential labor pool. However the inhabitants from Rotterdam –South can only make use of this potential if some conditions that obstruct their employability are satisfied. A necessary condition is a higher educational attainment, preferable MBO 3-4 in technical specializations. A second necessary condition is adequate soft skills, which means that higher levels of motivation and work ethic are required. Better mobility levels are important conditions to help increase the job search and reach area of the inhabitants from Rotterdam- South. Positive role models and good informal networks can further increase the amount of inhabitants of Rotterdam- South working in the midtech sector.

Several policy recommendations are formulated as a result of these conclusions. These recommendations focus on using and increasing the economic potential of the midtech sector by increasing the awareness and enlarging the interest for technical occupations and increasing the amount of youngsters following technical education. Moreover the location environment needs to be secured for the midtech firms established in the Rotterdam region. Also some recommendations are formulated how the inhabitants of Rotterdam- South can use the opportunities of the midtech sector. This involves creating awareness about the possible occupations in the midtech sector, trying to increase the educational level to MBO 3-4,

increasing the mobility levels to increase the area of search and reach of the inhabitants and support social projects using positive role models to get people interested in the midtech sector.

This research is not without limitations. The limitations that have to be mentioned are the following. Not all midtech personnel in the region is included in this research, the data comes from different sources which means that there are some differences in geographic scope, our information is based on a relative small group of firms compared to the entire midtech sector and we used interviews to gather our information which is a method that is subject to some problems.

For future research it is recommended to use questionnaires to gather data for a database. This enables the researcher to run an analysis on the important occupations in an industry more easily. In general more research is needed about the occupational- industrial targeting approach. Especially concerning areas in distress the approach could benefit from more research for which the current research is illustrative.

Preface

With this thesis I will finish the master Urban, Port and Transport economics. Seven months ago, in January, I started thinking about a topic for this thesis. I visited Dr. Erik Braun with the request whether he knew someone at the Ontwikkelingsbedrijf Rotterdam (OBR) involved in the project Kansenzones. I could see myself working there as an intern and at the same time writing a thesis. At the OBR, André de Groot told me he wanted a research about the midtech sector and not Kansenzones. Something I (and many people with me) never heard off and I was quite afraid whether this was really a subject for me, because the midtech sector involves a world in metalmanufacturing and elektrotechnics. This world I did not know and usually did not attract my attention. The topic however turned out to be very interesting and fun. Above all my imagination I could use my knowledge and interest in port economics and combine it my interest in cities. It turned out to be a perfect topic to end a master in Urban, Port and Transport economics. Moreover I recommend anyone to take the boat to the new RDM campus or drive by bus through the Waalhaven or even walk around in the Eemhaven and you will see some beautiful sceneries of industrial Rotterdam.

I have written this thesis for the OBR. André de Groot, my supervisor at OBR, has been able to motivate me a lot during our weekly meetings. Together we got to know the midtech sector and I would like to thank him for putting in all the effort in helping me with the thesis. A special thanks also goes to Wiljan, who has listened to all the stories and problems I had during the writing process. Third, I would like to thank all the people that helped and supported me during the process of writing the thesis at Concire (especially Hidde van der Veer), at OBR and my family and friends. Finally, I would like to thank Dr. Erik Braun for structuring the thesis and guiding me through the process and Dr. Bart Kuipers for co-reading the thesis.

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1 Introduction

In this chapter the topic of this thesis is introduced. Paragraph 1.1 illustrates the background of this thesis. The social and scientific relevance of this research are defined in paragraph 1.2. The problem statement is identified in paragraph 1.3 and paragraph 1.4 discusses the method. An outline of the thesis is presented in paragraph 1.5.

1.1 Background

Cities consist of various areas, prospering areas but also areas that are in distress. These distressed areas can easily become problem areas with high unemployment rates, crime, a low level of education, bad housing, etc. Local economic development projects try to improve these areas. The current Dutch approach tries to get people out of the negative spiral of decline. This is done by focusing on the aspirations of the inhabitants themselves of getting ahead in life and climbing on the social ladder (VROMraad, 2006). This approach aims at adding to the climbing of the social ladder aspirations of the disadvantaged inhabitants themselves by removing several barriers that obstruct their climbing process. One route of getting onto the social ladder is via the work ladder. The first step on this route involves getting a job.

Many projects aim at increasing work possibilities for disadvantaged inhabitants. Often these projects focus on altering the skills of the inhabitants by a supply side approach. This alteration of skills often results in an oversupplied labor market of people with the same skills but no demand for that skill. It is therefore important to look at ways to increase the job possibilities of people by focusing on demand side approaches. Targeting specific industries is an example of such a demand side approach. These targeting projects aim to increase the amount of business activity and jobs. This requires a very broad targeting approach which does not incorporate the specific skills of the inhabitants of the region. Therefore several researches have applied the occupational- industrial targeting approach (Currid and Stolarick, 2010 and Markusen, 2004). This approach looks at the specific occupations that are critical for the functioning of an area. The occupations in an industry important for one area can be fundamentally different from the occupations important in the same industry for another area. Therefore the occupational combined with the industrial approach is important, which allows for a more specific kind of targeting.

An example of a local economic development project that tries to get people onto the social ladder is the Pact op Zuid (PoZ) program in Rotterdam. The PoZ program aims at

strengthening the economic position of the Rotterdam- South area. A division of this coordinating project is the Ik zit op Zuid (IZoZ) project. Both projects are currently involved in strengthening the workforce of Rotterdam- South. By strengthening the workforce they hope to get people onto the work ladder and out of the negative spiral of decline. For the municipality of Rotterdam strengthening the workforce is one of their focus points according to the new (and old) coalition agreement (Municipality of Rotterdam, 2010A). The aim is that projects like PoZ and IZoZ cause for a better match between supply and demand for labor. This match currently lacks in many industries (Municipality of Rotterdam, 2010B).

This research shows the importance of the occupational- industrial approach for targeting in a specific area. This is done via a case study of the midtech sector in Rotterdam- South. This sector is identified by the initiators of the IZoZ project as matching with the people and industries currently located in the area. The midtech sector is a sector that rests on: “industry and construction trade that leans on high value craftsmanship, while high-tech mostly leans on first class knowledge” (Tordoir, 2010). The most important capability of the midtech sector is the experience build by trial and error and high- quality craftsmanship.

However not much is known about the midtech sector and its economic potential for Rotterdam and the area. Especially it is not known whether the midtech sector can bring employment for the inhabitants of the Rotterdam –South area. This research brings more insight in the concept midtech sector, investigates the importance of the midtech sector in the Rijnmond- Drechtsteden region, looks at the economic potential of this sector and looks at the potential of this sector for the inhabitants of Rotterdam- South. The thesis further illustrates how the occupational- industrial approach can work in an area in distress when removing some barriers that obstruct the climbing of the ladder aspirations of the disadvantaged inhabitants.

1.2 Relevance

Scientific relevance

Much has been written about revitalizing inner cities and depressed areas. Local economic development programs form a big part of this revitalization process; see for example Bartik (2003) and Blakely (1994). Sometimes specific industries are targeted to increase the economic activity in a distressed area (Porter, 1990). Another way of targeting is a combination of the industrial and occupational approach. This research will add to the existing literature by giving insight in the occupational approach combined with an industrial targeting approach following the view of Markusen (2004) and Currid and Stolarick (2010).

The difference between this research and previous research is that this research will specifically relate the occupational- industrial approach to distressed areas which has not received attention.

Societal relevance

The intended research has several implications for policy makers. Firstly, they know more about the existence of the midtech sector in the Rijnmond and Drechtsteden area. Secondly, they know more about the economic potential of this sector and the occupational importance of craftsmanship. If the midtech sector shows to be having economic potential for the area and for the inhabitants from Rotterdam- South, policy can be made to accompany this. Thirdly, if this sector does not have economic potential, money can go to other projects and the municipality can alter their economic programs and policy recommendations will be made in this field. Fourthly, policy makers will be made familiar with the occupational- industrial targeting approach, which allows for a more specific way of targeting.

1.3 Problem statement

The research question that is central during this thesis is:

What is the economic potential of the midtech sector in the Rotterdam region and is the potential workforce in Rotterdam- South able to make use of the economic potential in the future?

1.4 Method

To answer the above stated research question, a theoretical part and empirical part is presented. First, scientific literature is used to understand how the occupational- industrial approach can be used in areas that need to be revitalized. It is investigated what the conditions are to use the occupational targeting approach combined with the industrial targeting approach in an area in distress. By reading this literature overview it is important to take into account that most research used is American research which focuses on black males as disadvantaged inhabitants. In the Netherlands disadvantages do not solely concentrate on black males.

After the literature research a case study is presented that focuses on the midtech sector in Rotterdam- South. First the analysis focuses on showing the importance of the sector by mapping the location pattern of the midtech sector in the Rotterdam- South area and the surrounding areas (The Rijnmond- Drechtsteden area). It is also shown where in Rotterdam

most labor intensive firms in the midtech sector can be found. Secondly, the economic potential of the midtech sector in the Rotterdam- Rijnmond and Drechtsteden region is analyzed, by making use of interviews with employers and industry organizations in this field. The economic potential is determined on the basis of information on clustering, investments in innovation and new markets, investments in physical infrastructure, outsourcing and employment creation. Thirdly, if the midtech sector shows to be having economic potential for the Rotterdam- South area, suppliers of schooling and training facilities in this field and knowledge centres are interviewed. With help of these interviews, and the interviews from the already discussed companies, a match between supply and demand for labor in the midtech sector will be looked for. From these interviews it is shown whether the conditions for applying the industrial – occupational approach in an area in distress are necessary.

Interviews are used because they enable to receive information about different fields in a short period of time. For this research a lot of different information had to be gathered, such as information about labor market in the sector, information about schooling and information about reasons to locate. This broad range of subjects meant that sometimes deeper question had to be asked about the reason why and how. Inquires would not have acquired us this kind of information. Moreover the interviews provided a broad picture of the market, which was necessary because information about the midtech sector lacked.

1.5 Outline

The thesis begins with the literature research in chapter two. The third chapter explains more about the midtech sector and our method of analysis. Chapter four illustrates the economic potential of the midtech sector. Whether this matches the potential workforce of Rotterdam-South and whether the conditions for applying the industrial- occupational approach in an area in distress are necessary is researched in chapter five. Finally chapter six concludes this research, answers the research question, offers policy recommendations and shows the limitations of this research and possibilities for future research.

2 The occupational- industrial targeting approach in an area in distress

Chapter 2 represents the theoretical part of this thesis. In paragraph 2.1 the concepts distressed areas and local economic developments are indentified. An outline explaining the different types of local economic development policies which are implemented in the Netherlands during the years is given in paragraph 2.2. The current Dutch approach adds to the climbing of the social ladder aspirations of the disadvantaged inhabitants by removing several barriers that obstruct their climbing process. The barriers that obstruct the inhabitants from climbing the work ladder are identified in paragraph 2.3. How the occupational approach combined with the industrial approach can increase the amount of people on the work ladder is explained in paragraph 2.4. In paragraph 2.5 a theoretical framework is presented with the barriers for climbing the work ladder as conditions for the functioning of the occupational-industrial targeting approach in an area in distress. Paragraph 2.6 ends this chapter with a conclusion.

2.1 Defining depressed areas and local economic development

Recent years, structural changes in the world altered the mix and amount of people living in cities. As a result many lower educated, often minority groups, were left in the inner city and concentrated themselves in certain districts (Katz (1989) and Wilson (1996)). These districts can be characterized by high poverty levels. Amongst other things, two major structural changes can be mentioned that increased inner- city poverty concentration.

First, the demand for low and high educated labor changed drastically. The change in demand for labor is caused by a shift in manufacturing plants from the western world to Asia. Kasarda (1990) and Katz (1989) showed the reduced demand for low and middle educated manufacturing jobs in cities. At the same time the information- service sector grew rapidly in the western world which increased the demand for white collar labor. This however are jobs for either low skilled or higher skilled labor (Teitz and Chapple, 1998). As a consequence, the low- middle educated workers in the inner city where left unemployed in the former manufacturing areas of the city.

A second structural change is the increased mobility of people, because of the introduction of the car. This resulted in a separation of the living and working space. People were able to travel longer distances and do not have to work in the place they live. Houston (2005) found that many high educated people left the crowded inner cities to live in the surrounding periphery. At the same time the lower educated were not able to move to the periphery since they did not earn enough to buy a car or even have the knowledge about possibilities in the

periphery. The result of this outflow of higher educated people was a concentration of lower educated, unemployed people in the former industrial districts of the city. Easily such an area comes in distress even further, because unemployment often goes hand in hand with an increase in crime and declining levels of social organization (Wilson, 1996). Other problems are less business viability, low economic opportunities, bad education and bad housing. In sum the area is characterized by a downward spiral of decline. As Conway and Konvitz (2000, p. 3) mention:

"Distressed neighborhoods refer to areas within cities which suffer from multiple deprivations."

Once an area is in distress it is really difficult for the inhabitants of such an area to get out of the negative spiral of decline. It is therefore important to improve the living situation of these inhabitants. Local economic development projects help inhabitants of distressed areas to get out of the negative spiral of decline. The term economic development has been subject of a lot of debates. The definition is being said to be too broad and too narrow. For example Porter (2000) takes a vey narrow approach: "Local Economic Development is the creation of jobs and sustainable business activity that benefit disadvantaged inner- city residents". This definition neglects improved housing, public services and schools as important issues in revitalizing inner cities. Because of this neglect this definition is to narrow for this research. Blakely (1994) uses the definition: "The process in which local governments or community based neighborhood organizations engage to stimulate or maintain business activity and/ or employment." This definition stresses the same aspects as Porter (2000) does. At the same time this definition also neglects the importance of public services and schools. It is important to incorporate all these aspects in the definition of local economic development and therefore the definition of Bartik (2003, p. 1 from: Kane and Sand, 1988) will be used in this research:

"Local economic development is the increases in the local economy's capacity to create wealth for local residents."

To create wealth for the local residents, land and labor should be used more productively according to Bartik (2003). This can be achieved through local job growth or by shifting towards more productive uses of labor and land. Eventually fiscal and employment benefits should be provided while keeping local quality of life. Bartik's approach (2003) shows one way of looking at local economic development policies. These policies can take many different forms and stress different aspects, such as a focus on the built environment or a

focus on business creation. Blakely (1994) identified four different points of focus an economic development policy can have, namely: the built environment strategy, the business environment strategy, the human resources strategy and the neighborhood strategy. The built environment strategy focuses on the development and planning of the land area which improves the built environment. This is mostly a physical approach. The business environment strategy aims to attract, sustain, create or retend business activity to maintain a healthy economy. This strategy aims to increase the number of jobs available in the area, to better meet the supply and demand for jobs in the area. Porter (1997) believes this strategy is beneficial for the disadvantaged inner city residents and therefore he finds it very important. According to him, you really target the disadvantaged inner city inhabitants via the creation of jobs and sustainable business activity. The human resource strategy focuses on offering human resources to increase the opportunities for the unemployed and underemployed. This strategy aims to improve the skills and motivation of the inhabitants and thereby increase their possibilities on the job market. The neighborhood strategy focuses on the neighborhood and provides opportunities for the inhabitants specifically targeted on a small scale. According to Blakely (1994) this small scale focus is very important because every area requires a different approach. The neighborhood approach has strong social objectives underpinning economic objectives. Therefore this approach can be mentioned as following out or being the extension of the more economic business strategy. The built environment focus seems to have declined in importance whereas the neighborhood focus, which takes into account social aspects as well as physical aspects, gains importance recent years (Blakely, 1994).

Besides another point of focus in local economic development projects, another change has taken place recent years. Projects are more and more developed from the bottom- up and formed through public- private partnerships. Blakely (1994) stresses the importance of developing initiatives from the bottom up, initiated from the local or community level. Conway and Konvitz (2000) agree with this bottom up approach, but at the same time focus on a multidisciplinary approach. Public- private partnerships, to improve social inequality, are an important starting point (Bartik, 2003).

2.2 The current Dutch approach– climbing the social ladder

Many local economic development initiatives and approaches mentioned in paragraph 2.1 are implemented in the Netherlands. During the years different approaches gained importance while others declined in importance. Since this research takes place in the Netherlands it is

important to have an overview of the different local development policies from the period starting after the Second World War until nowadays.

After the Second World War and in the 1960's housing problems in inner city areas were solved by demolishing these houses. Moreover, to fulfill the increased need for offices and parking spaces the old housing had to be removed (van der Werf, 1997). In the 1970's this approach got criticized because it did not take into account the current residents or social structure of the neighborhoods. The housing policy had to fit more with the existing social and town planning structure. The policy initiatives changed and the building for the neighborhood (Bouwen voor de buurt) movement gained importance (van der Werf, 1997). The aim was to increase the quality of the existing housing stock by renovation while retaining the social structure.

KEI research (2010) mentions two drawbacks of this approach. Firstly, the building focused on housing for the existing inhabitants which were people of the lowest income brackets. This meant that the people who are climbing the social ladder have to move elsewhere and cannot move to better housing in the neighborhood. During that period people were unfamiliar with mixed income living in a neighborhood. Secondly, people started to believe that the problem could not solely be solved by physical change. Social- economical problems such as unemployment, crime, ethnic tensions are not solved by building new houses. As a result of these critiques an approach including social- economic measures was introduced in the early 1990's. Eventually this program is further developed into the Urban Renewal Program (Tweede Kamer, 1996). The program was aimed at reducing unemployment, increasing the social cohesion and increasing the quality of life in the area. This approach focuses on involving the current inhabitants with the changes. The period can be characterized by considerable faith in the effectiveness of the physical approach together with a social approach.

The social approach was further developed during the introduction of the program Grotenstedenbeleid (GSB) in 1994. This program was initiated by the four largest cities of the Netherlands and focuses on three pillars; a physical, economical and social pillar. Cities had to be; vital, safe and liveable (VROMraad, 2001). The GSB program was focused on the city as an economic engine of national economic growth, between cities and within cities segregation should be minimized and finally the program should increase safety. The first GSB policy during the period of 1994- 1998 mostly focused decreasing the unemployment level by offering state subsidies for jobs (Melkert- jobs) (Braun et al, 2006). The second GSB policy during the 1990's focused on two issues. Firstly, the increasing gap between rich and

poor. Secondly, the outflow of higher and middle educated families and an inflow of low educated people which are still attracted by the possibilities in the city. The main difference between this GSB and the first GSB policy is that an integral approach becomes central (Braun et al, 2006). This means that different subsidies of the national government are bundled for one long term goal. The municipal government is itself in the position to divide the subsidy the way to succeed in this long term goal.

In the period of the second GSB the physical pillar again receives most attention, namely by physical changes it is expected to solve social and economical problems. To increase the effectiveness of the urban renewal policy the Nota City Renewal is introduced (Tweede Kamer, 1996). The aim is to make expensive new living environments, this aim fits with the second GSB policy. By building expensive housing deterioration of neighborhoods and further segregation of poor and rich neighborhoods can be reduced. This would lead to the so called mixed income neighborhoods. The attraction of middle and higher incomes should increase the social structure of an area. The attraction of middle or high income groups also means an increase in the number of role models which is important to attract lower educated to get out of a negative spiral of decline.

In 2000, the Ministry of VROM introduced the Nota Wonen which should change the mindset from not only attracting people from outside the neighborhood to the area but also give considerable attention to the ones currently living in the area. The aim of this project is to let people make a living career within their own neighborhood and increase the quality of the inner- city housing (Ministry of VROM, 2000). As a consequence of this approach more mixed income living can be expected and thereby increasing the social cohesion in the neighborhood (KEI, 2010).

During this period the third GSB policy is starting. As the research of Braun et al (2006) indicates an introduction monitor of this policy showed that unemployment was rising again, business start- ups declining and a growing feeling of insecurity among the Dutch in the cities arose. The research also shows that GSB 3 than starts working with domains under the name: “working together on the strength of the city”.

In 2006 the VROMraad than suggests a new approach. For years local economic development projects were characterized by either a focus on the housing market and change the built environment or by a focus on social development projects focused on creation of social cohesion (VROMraad, 2006). Therefore the VROMraad (2006) introduced an approach which connects the physical and social approach. The program is called: Stad en stijging, in which the current inhabitants are encouraged to use their opportunities. The rationale behind

this approach is that all people want to get out of distress and have aspirations to climb the social ladder. These people which climb the social ladder can have a better quality of life, at the same time they become role models and can offer opportunities for others. An important aspect of this approach is that it tries to bind the social and physical approach together instead of developing them separately. The task of this local economic development project is to facilitate the climbing of social ladder aspirations of the residents and taking away the interferences to achieve this. Four routes have been identified on which inhabitants can start their climbing process: living, learning, working and spare time.

This short recap of the Dutch urban redevelopment policies shows some clear changes over time. In the period after the war a physical approach was central. During the beginning of the 1990's a social approach was introduced. Currently the focus is on combining this physical and social approach as opposed to introducing them separately. Furthermore there is a clear change from developing neighborhoods for one income class towards mixed income neighborhoods. In the beginning, the policies aimed at mixed income neighborhoods focused on attracting people from outside the neighborhood. Currently the focus is towards providing opportunities for the current inhabitants to make a living career within the own neighborhood. The latest policy plan of the VROMraad (2006) really tries to combine the social and physical approach and introduces four climbing routes for people in disadvantaged areas. The rationale is that people wish to advance in their life. For municipalities this means removing the barriers on the different routes that obstruct people to climb on the social ladder.

2.3 Barriers for climbing the social ladder

People in distressed neighborhoods have to cope with a lot of obstructions or barriers before they can start climbing the social ladder. In this research we focus on the social advancement route via work. In order to be able to get a job you have to commend adequate human capital, adequate social capital, adequate mobility possibilities to get to a job, and not be involved in drugs or alcohol abuse in order to hold on to a job. Other research (Bartik (2003) and Giloth (1998: from from Bluestone, Stevenson and Tilly, 1993)) showed that these issues are often lacking or are a problem in distressed areas. Other things can be mentioned that are a problem in distressed areas, but the just mentioned problems specifically obstruct people from getting a job.

2.3.1 Inadequate human capital

Education

Becker (1975) identified the productivity of workers as the outcome of physical and human capital. Three elements are of basic importance with respect to the human capital factor namely; education, sector specific job skills and work experience. Besides these three, the innate ability of the human itself is also important. On all these aspects inner cities tend to score lower. According to Becker (1975) the reason for the lower score in inner cities is that the population is younger and the residents have lower educational levels. Katz (1989) illustrates that inner city blacks in low poverty areas, characterized by high unemployment, have considerable lower educational levels than others living in better areas. Datcher (1982) also showed that when unemployment and poverty in a community increases the average educational level decreases. Crane (1991) showed that if the neighborhood quality declines considerably, the dropout rates and teenage childbearing increases dramatically for both black and white youngsters. After a literature review Orfield (1997) confirms this view that "when poor are freed from poor neighborhoods and schools and provided with economic opportunities, their educational (..) prospects improve dramatically." Kasarda (1990) illustrated an increase in disparity between city jobs and minority city residents. The reason for this disparity is what he calls the skills mismatch, which is an increasing disparity between unemployment rates of central city white and black males due to a lack of certain skills of black males. These articles show that with increasing poverty levels often decreasing educational levels are seen by people in distressed areas. Therefore increasing poverty levels combined with lower educational levels decrease the probability of getting a job.

Soft skills

Another aspect, which firms increasingly find important when hiring new personnel are the soft skills such as motivation, flexibility and interaction. Holzer (1996) found through an employer survey that hard skills (education levels) are important for hiring, but at the same time soft skills are of increasing importance. Porter (1997) shows, through manager interviews, that disadvantaged people frequently lack soft skills. Moss and Tilly (1996) concluded that many managers believe inner- city black males frequently lack these soft skills. The reasoning of the managers is that, amongst other things, black men seem less willing to adapt to business norms. This confirms the view that the lack of soft skills of disadvantaged people reduces the employment chances for them.

The increasing importance of soft skills makes it more problematic for youngsters to find a job. Wilson (1996) explains this by saying that youngsters usually have not yet acquired enough job skills and work experience. Therefore they have problems entering the labor market. At the same time the youngsters are the ones in a position to gain these skills and experience in a short period of time, by for example on the job training programs. Therefore Wilson (1996) concludes that youngsters are an important group to focus on because they are in a position to acquire the right soft skills to increase their position in the labour market.

2.3.2 Mobility

Lower educated people are more bound to their neighborhood than high educated people. In other words they have a low commuting reach. The reason for this low commuting reach is that they have less means or knowledge to engage in opportunities outside their neighborhood than higher educated people do. A spatial mismatch arises where the demand for labor does not meet the supply in an area. The spatial mismatch theory is often discussed (Teitz and Chapelle, 1998). This theory, developed by Kain (1968), argues that when many firms left the inner city that offered jobs requiring low skill levels, in particular in manufacturing, the residents did not follow. The residents did not follow because of discrimination in the housing market and the cost of communiting. Namely, housing outside the inner city is too expensive. With the new firms in the suburbs and a house in the inner-city this means commuting to the job for disadvantaged persons. Commuting is however a problem because disadvantaged people often lack personal transportation which considerably declines their commuting distance (Lawless, 1995 and Holzer et al, 1994). Besides a lack of personal transportation, research has shown that there is a strong correlation between commuting distance and average wage. For people with lower wages, the commuting distance tends to be lower because of the net earnings after commuting costs (Holzer et al, 1994). If lower educated people have a lower area of reach this forms a barrier of limited available jobs for them.

2.3.3 Inadequate social capital

Informal networks

Ihlanfeldt and Sjoquist (1990) conclude that for minority youth a nearby job is important. Youngsters rely on word- of- mouth information about job search possibilities, as most people in distressed areas do (Lawless, 1995). Worth of mouth information is at the same time limited to a certain distance, meaning that youth have a narrow job search reach (Holzer, 1987).

Not only is word of mouth information limited to a narrow search reach, it also relies on good working informal networks. Granovetter (1995) explains more about the relation between informal networks and the probability of getting a job. Namely he argues that well developed informal networks increase the probability of getting a job and receiving information about higher paying jobs. However, in distressed areas these informal networks do not always seem to work properly. Since there are not many people with a higher position on the job ladder that know about possibilities. Without good working informal network the chance of getting employed therefore decreases.

Role models

People are the most important aspect in forming informal networks. The problem in distressed areas is that when the middle classes left these neighborhoods, few residents where left behind who can offer the social rescources to act as social ladders and really build these informal networks. These people, who are a little bit higher on the social ladder, are not only in a position to build the social networks they are also the persons who have the important function of positive role models. According to Wilson (1996), without informal networks and positive role models social isolation occurs, which increases for example high rates of crime and welfare dependency. Case and Katz (1991) find a positive relation between the behavior of youth and their parents. The probability of being engaged in criminal activity, drug abuse and teenage pregnancies are higher for people who have parents also involved in such a situation. They also find that if peers in the neighborhood show a certain type of negative behavior (crime, drug abuse) the probability is higher that other teens will act the same in this neighborhood. The problem is not only the lack of role models but the existence of negative role models in distressed areas as Wilson (1987) concludes.

2.3.4 Substance abuse

Another problem frequently mentioned which increases the problems in distressed areas is the excessive use of drugs and alcohol. Katz (1989) found that substance abuse is higher in high poverty neighborhoods. This addiction limits people to get a job or hold on to a job. Porter (1997) showed through interviews with managers that hiring people from disadvantaged areas is problematic because of excessive substance abuse by many of inhabitants of these areas.

2.3.5 Crime

Crime is another barrier that obstructs people from getting employed. Porter (1997) showed that criminal behavior, shown through crime sheets, makes managers reluctant to hire these

people. This is problematic because criminal activity is higher in high poverty neighborhoods than elsewhere (Katz, 1989, Wilson, 1996). Freeman (1991) found that better education would decrease the probability of being involved in criminal activity and increase employment possibilities for disadvantaged youth.

2.4 Industrial- occupational targeting approach

Different local economic development policies can be implemented which improve the position of the inhabitants in distressed areas. As already discussed different routes can be used to get people onto climbing their social ladder. This research focuses on getting people onto the social ladder via the work route. Different policies can be implemented to get people to work. These can be broadly divided in supply side approaches and demand side approaches.

Supply side approach

Often, programs focus more on the supply side of labor. In order to get people back to work these programs alter the soft and hard skills of low skilled workers. As a consequence, these people are indeed better skilled but enter an oversupplied labor market because the programs focus on the jobs in which already a large supply of labor is present. Lawless (1995) states a focus on supply side interventions often causes problems in terms of displacement and substitution. It might be more useful to focus on a sector, which does not show an overstressed labor market but has economic potential. Therefore a focus on labor demand is important.

Demand side approach: **Industrial/ cluster targeting**

An important aspect of the industrial approach is it takes into account the demand side of the labor regeneration process. The process of labor demand is often neglected according to Turok and Webster (1998). They argue it is particular important to focus on labor demand for the disadvantaged blue collar workers, because these people often enter jobs which show overstressed labor supply markets.

By using an industrial or growth sector approach one is targeting specific industries or sectors. The aim is to retain or expand their location pattern in the area. Besides the aim to increase the amount of businesses another aim of this approach is when targeting an industry or sector is that the demand for labor in these industries/ sectors increases.

Specific industries often cluster spatially. Porter (1990) concludes that regional clusters or related industries are the source of jobs and income, not individual firms or unrelated

industries. The advantage of a cluster of related firms locating in close proximity to each other is that they can take advantage of each others knowledge, common suppliers and common infrastructure. Porter (1997) advocates the importance of targeting demand by the integration with existing regional clusters. Bartik (2003) states it is important to focus on clusters since this shows the specific knowledge of middle educated workers. Very low skilled workers can be found everywhere en high skilled labor is very mobile. Middle educated workers are in between these groups, but do have specific and important knowledge. The knowledge of middle educated is scarce and less mobile and an asset for a locality or cluster.

When targeting via the cluster based approach and having chosen a specific cluster does not mean it will be successfully growing (Bartik, 2003). Targeting by specific industries also has some problems. Krugman (1983) already stated that it is difficult to choose certain industries, especially because it is difficult to choose which critical factors are most important to determine which industry is targeted. Thompson and Thompson (1987, p.554) mention another problem of industrial targeting. They state that: “the strategist too often acts as if it is necessary to target the whole industry, from headquarters through laboratories to the assembly line. (...) The occupational-functional approach reminds the local development strategist that an industry can be disassembled and only part of it targeted to match the special locational needs of a given operation to the functional strengths of the home locality”. This critique really shows it might not be in the best interest of an area to focus on a sector as a whole, but look at which occupations within an industry are important for that particular area. Targeting will then be via an occupational level important for the region within a specific industry.

Industrial combined with occupational targeting approach

The idea of Thompson and Thompson (1987) is that occupations are very important when wanting to understand the structure of an industry. Currid and Stolarick (2010) argue that industrial productivity is a function of human capital, which increases the importance of human capital. At the same time they note that a focus on human capital alone does not tell anything about value added, but solely about demographic characteristics. Therefore they argue that a focus on human capital is necessary but together with a focus on industries. Barbour and Markusen (2007) also show that a focus on industry is not always sufficient to understand regional activity. Markusen (2004) stresses the importance of human capital in combination with a focus on industries when making local economic development strategies. She illustrates the importance of the occupational- industrial approach that by using this approach one does not solely focus on industries or sectors but additionally takes into account

occupations. She argues that the advantage of this approach is its specific focus on the regions' skill base combined with an industrial base. Namely when looking at the skill base one is looking at the important occupations for the region, when looking at the industrial structure one is looking at the type of firms present. This allows one to see which types of occupations or skills are important in a region for that sector/ or group of sectors or industries. Markusen (2004) concludes that this provides a more targeted approach for local economic development.

The idea which stresses the importance of education in local economic development goes back to Thompson and Thompson (1987). With their critique on the traditional industrial approach they already stress the importance of occupations as networks of workers and its importance in addition to targeting of industries. They argue that cities need to distinguish between: "What they make and what they do" (Thompson and Thompson, 1987, p. 547). Feser (2003) uses this view and looks at occupational clusters through their common skills or tasks. Looking at occupations that way allows one to see the important skills for a specific region. He concludes areas do exhibit distinctive occupational specializations.

Currid and Stolarick (2010) do not solely look at occupational clusters as Thompson and Thompson (1987) and Feser (2003) but argue that you should look at occupations and industries together. They state that bringing together occupational skills with industries can eventually maximize the potential of both. In their analysis they give the example of the automotive sector in Los Angeles. When only having an industrial focus on the automotive sector, this sector would be looked at as declining in the future because of outsourcing and global competition. However when looking at occupations their analysis shows people in Los Angeles work in designing and programming in the automotive industry. Their example shows you should not just look at employment within an industry but look at the mix of occupations. Because when regularly targeting an industry the automotive industry in Los Angeles would have given a subsidy for keeping the assembly line workers at work. This would have had no effect at all in Los Angeles. Therefore Currid and Stolarick (2010) argue the advantage of the occupational- industrial approach is when knowing the occupational mix of an area for a specific industry, economic development policies can specifically target for that region.

Another important aspect of the approach is it does not solely take into account the importance of higher educated people, but the middle or lower educated are also of importance. This is special since most focus nowadays is placed on people with a bachelor degree or above, as for example Florida (2002) advocates.

For successful targeting of occupations Markusen (2004) developed a framework with five critical factors for identifying and targeting the right occupations for local development. These five critical factors are; existence of high skilled labor, sector shows growth potential, firms within sector cluster spatially, firms within sector cross fertilize with other sectors, encourage entrepreneurship, and finally match with the existing workforce. Currid and Stolarick (2010) argue that the framework of Markusen (2004) expects that it is known which occupational clusters exist in an area. However they state that a "step zero" is necessary to identify what the existing strengths and weaknesses the region are. It becomes clear than what the regions possesses and requires for its true occupational mix.

2.5 Framework industrial- occupational targeting approach in revitalizing areas

As explained in paragraph 2.2, the climbing of the social ladder by different enhancement routes is the current Dutch approach to revitalize areas (VROMraad, 2006). By removing the barriers that obstruct people from climbing the work ladder, identified in paragraph 2.3, people are able to improve their working position. Paragraph 2.4 showed the importance of the occupational- industrial approach that Markusen (2004) and Currid and Stolarick (2010) developed. They do not mention this type of targeting specifically for an area in distress. Several barriers that obstruct people from getting employed limit the functioning of the occupational- industrial approach in a distressed area. These barriers have to be removed for a successful targeting result. Therefore a framework is identified that shows how the occupational – industrial targeting approach can work in an area that is currently revitalized.

Step zero

The starting point of the occupational- industrial approach in a distressed area is the 'step zero' which Currid and Stolarick (2010) identify. The 'step zero' clarifies the strength of the current workforce. Markusen (2004) only mentioned the importance of the current areas workforce as one of critical factors for the working of the occupational- industrial approach. However, as Currid and Stolarick (2010) mentioned, the assets of a particular area should be first known before you can start targeting specific occupations.

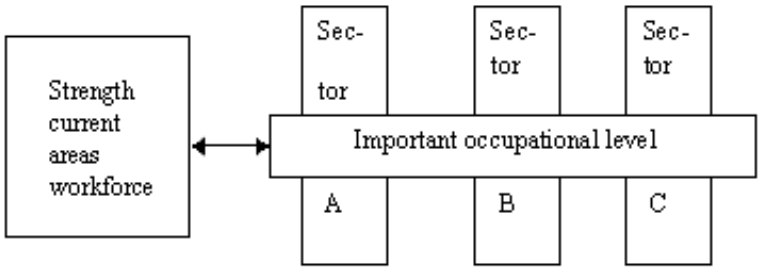
Step zero: strength current workforce in the area

A sector with economic potential

When knowing the current areas workforce, it is possible to know the most important skill level in the area. When knowing which skill level to focus on, it is possible to identify the important occupational level for the area. When the occupational level is known one can target some industries/ sectors in which this educational or skill level plays a large part. Important therein and in accordance with Markusen (2004) is that the sectors show economic potential. It is important that the sectors show possibilities for employment creation, possibilities for new markets, cluster spatially and cross fertilize with other sectors because that makes it possible for workers to get across sectors by their occupational level (Markusen, 2004).

As Figure 1 illustrates the current areas workforce determines the occupational level to focus on. At the same time the occupational level also influences the workforce of the area. When companies are in need for a certain occupational level, schooling facilities will adapt to this demand and by doing this the workforce will be trained for these occupations. Therefore the strength of the areas workforce influences the targeted occupational level, but this occupational level also influences the areas workforce. Figure 1 also shows that the occupational level is part of many sectors or industries, meaning that workers within this occupational level are able to switch between industries.

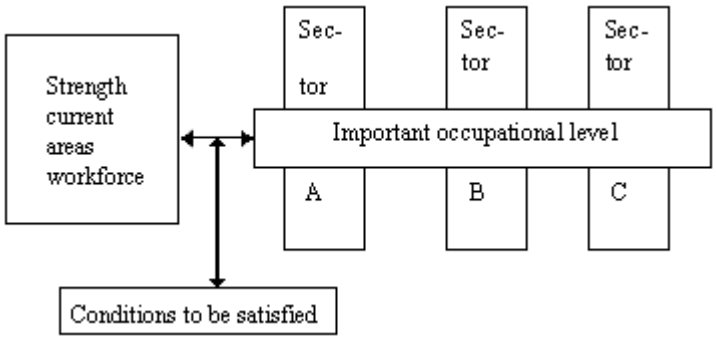
Figure 1: Framework occupational- industrial targeting



Conditions for success of occupational- industrial approach

As paragraph 2.3 showed, people in distressed areas often lack certain capabilities. The lack of capabilities will decrease the probability of getting employed for the residents in an area in distress. The barriers mentioned in paragraph 2.3 are the conditions that need to be satisfied to achieve the highest result for an occupational- industrial targeting approach in a distressed area. If the conditions are satisfied, the supply of labor can better meet the demand for labor. Figure 2 illustrates the occupational – industrial targeting approach for an area that is being revitalized.

Figure 2: Framework occupational- industrial approach for an area in distress

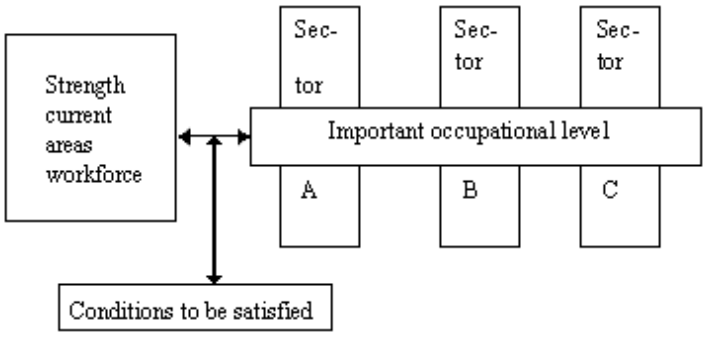


If the barriers that obstruct inhabitants from getting employed are removed, the conditions are satisfied, the strength of the areas workforce alters. It can be expected that the skills will increase and that the area becomes stronger. The current workforce in the area and the occupational level also have an impact on the conditions to be satisfied. Because by for example on the job training programs the workforce of the area can be strengthened without the condition satisfied beforehand.

2.6 Conclusion

Chapter two argued for the usage of an occupational- industrial approach in an area in distress. The advantage of the approach is one can specifically target occupations needed in a sector/ industry, which matches with the current areas workforce. However, this type of targeting is not yet specifically used in distressed areas. It is therefore important when applying the occupational –industrial approach in a distressed area that some conditions are satisfied before the system will work properly. These conditions include adequate skill level, a good mobility network, adequate social networks, reduction of substance abuse and a reduction of crime. The literature review showed that when these conditions are satisfied the probability of getting employed for people in an area in distress increases. Figure 3 illustrates the framework of the occupational- industrial approach for an area in distress.

Figure 3: Framework occupational- industrial approach in an area in distress



3 Methods

Chapter two showed the importance of the occupational- industrial approach for specific targeting in an area. Paragraph 3.1 shows how the working of the occupational- industrial approach for an area in distress is tested empirically in this thesis. The concept midtech sector is explained in paragraph 3.2. Paragraph 3.3 illustrates how the economic potential of the midtech sector is measured. The different hypotheses that form this research are outlined in paragraph 3.4. Finally paragraph 3.5 shows the geographic scope of this research.

3.1 Research design

In order to test the outcomes of chapter two and answer the research question a case study about Rotterdam- South is presented. The economic potential of the midtech sector, in which an occupational level that represents the skills of the inhabitants of the region -the craftsmanship level- plays an important part. It is tested whether the demand for labor in the sector can meet the supply of labor in this area. Rotterdam- South is still an area in distress. It is therefore expected that some barriers have to be removed before demand and supply can meet.

The economic potential of the midtech sector is tested via interviews with different players in the midtech sector. 23 employers are interviewed, of which 8 are key players in the region[1] and 15 are small or medium sized firms (see Appendix 1). In order to see whether this provided sufficient information about the region also different industry organizations are interviewed. Those where asked the same questions as the companies however they answered them for their industry broadly. The interviews with the industry organization confirmed the view of the individual firms. Of the 23 companies interviewed, 12 companies are located in Rotterdam and 11 are located in the Rijnmond- Drechtsteden region. It is tried to speak with either board members or human resource directors of the company in order to get the right information.

In order to see whether the demand for labor can meet the supply of labor from the Rotterdam- South area, the interviews with the already discussed midtech firms are used. Furthermore people from a broad range of the labor market supply such as representatives of schools, employment agencies, sector knowledge centres, and different municipal parties engaged in the labor market in Rotterdam are interviewed (see Appendix 2). It is also

[1] Kamer van Koophandel (2010), on request they identified a list which showed the 200 biggest employers in the Rotterdam- Rijnmond Drechtsteden region, without governmental organizations.

analysed whether the mentioned conditions are necessary to increase employability of the potential labor participants from the Rotterdam- South area.

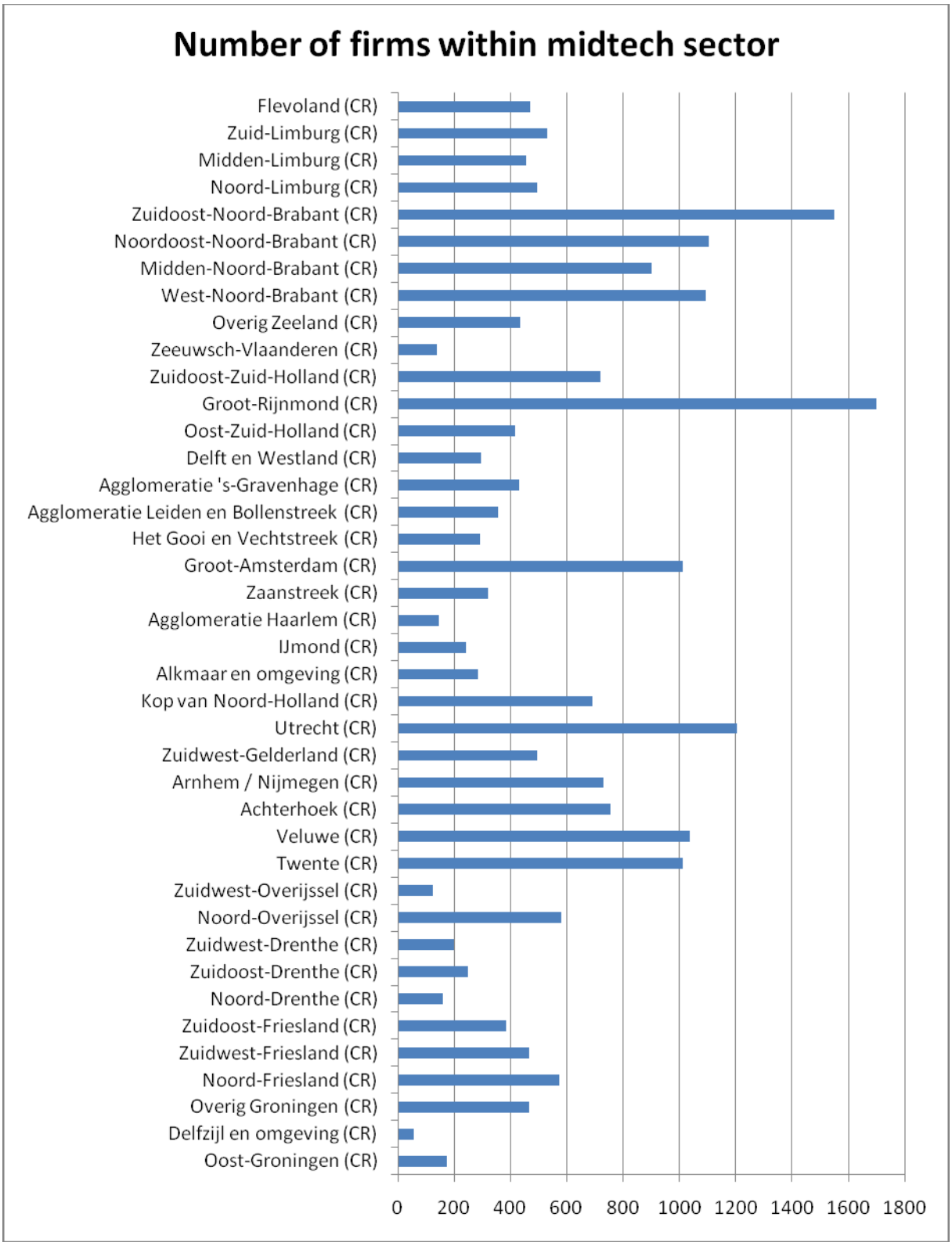
3.2 The midtech sector

The economic division of the municipality of Rotterdam stresses the importance of the workforce for the economy (Municipality of Rotterdam, 2010A). The focus derives from the young age level of the inhabitants of Rotterdam. Most cities in the Netherlands are ageing while Rotterdam rejuvenates. These young inhabitants all need to work in the future. Therefore many programs at the municipal department of economy now focus on the labor market. Particularly a focus is on the economic potential of different sectors (mostly in terms of employment creation) and a focus on the current mismatches between the demand and supply of labor in several fields of the labor market (Municipality of Rotterdam, 2010B). The IZoZ project is a privately initiated subproject of the coordinating municipal project PoZ in Rotterdam- South. The IZoZ project aims to bring employment for the youngsters back to Rotterdam- South. In order to achieve this more insight is needed about the match between demand and supply for labor.

The initiators of the IZoZ project identified the midtech sector as a sector matching the industries currently located in the area (IZoZ, 2009). According to them, the high value craftsmanship was already present since Rotterdam's industrial past. The port of Rotterdam plays an important role. Dredging and the construction of ships (the shipyards) have been located in the Rijnmond- Drechtsteden area for many years. Related to this type of port industries also heavy industries and construction firms are located in Rotterdam. This includes for example companies that supply the shipyards with materials. As a consequence, many firms in the metal industry can be found in the Rotterdam area. These are the types of industries that are expected to be still important for Rotterdam, and matching with the potential of the workforce of Rotterdam. Another project, to regenerate the Stadshavens area, also partly focuses on the midtech sector as an economically potential sector (Concire &WSA stedelijke ontwikkeling, 2010). Again the main reason to focus on the midtech sector is the industrial water- related past, which still causes many industries to be located in and near Rotterdam. Rotterdam is one of the technology regions identified by the ministry of Economic Affairs (2009) as "Pieken in de Delta". When looking closer at the technology character of this specific region research showed that the medium tech industry is stronger represented in the Rotterdam region than elsewhere in the Netherlands (Platform Betatechniek, 2009).

Figure 4 illustrates the presence of a midtech cluster in the Rotterdam- Rijnmond region. This figure shows that in Rotterdam- Rijnmond most firms in the midtech sector are located.

Figure 4: Number of firms in midtech industry



Source: CBS, 2010, firms within midtech sector, code 25, 27, 28, 29, 34, 35, 36121, 4524. Codes are adapted from the SBI codes of KVK, adapted by author.

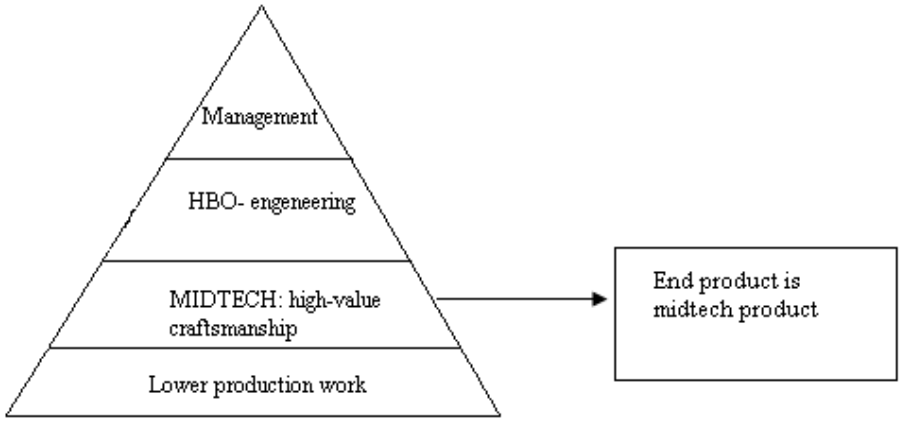
These projects and the indication that the midtech industry is stronger represented in the Rijnmond region than in the rest of the Netherlands explain the focus on this sector. It explains why the municipality responsible for the Rotterdam- South area currently wants to know whether the midtech sector really has economic potential. Economic potential for the midtech sector can possibly lead to a growth in jobs in the future. This growth in jobs and matching of labor demand and labor supply is one of the focal points of the municipality. Therefore the focus in this research is on the midtech sector and its possible match between labor demand and labor supply.

Tordoir (2010, p. 4) defined the midtech sector as: “industry and construction trade that leans on high value craftsmanship, while high-tech mostly leans on scientific first-class knowledge”. The most important capabilities are experience and the skill level high- quality technical craftsmanship. Experience is built by trial and error, by which laborers have to learn their craft. The schooling facilities that fit with the midtech craftsmanship level in the Netherlands is MBO technological educations.

The sectors in which the midtech craftsmanship is part of the core business of the company are identified in this research. It is important to note that in other sectors firms can be involved in midtech related operations. However this is not their core business and therefore they are not part of this research. For example a firm is excluded from this research that has an in-house maintenance staff for their machines park, but does not produce midtech products. The maintenance staff is midtech personnel, however the end product is not midtech and therefore not part of our research.

A company in the midtech sector broadly has the structure as Figure 5 shows. Each company has a management level, some higher educated personnel, the midtech group which requires high value craftsmanship and the lower production workforce (see Figure 5). The end product of the midtech companies is their core business and comes from the midtech production level. The high quality craftsmanship that creates the products is the strength of the company and the strength of the sector.

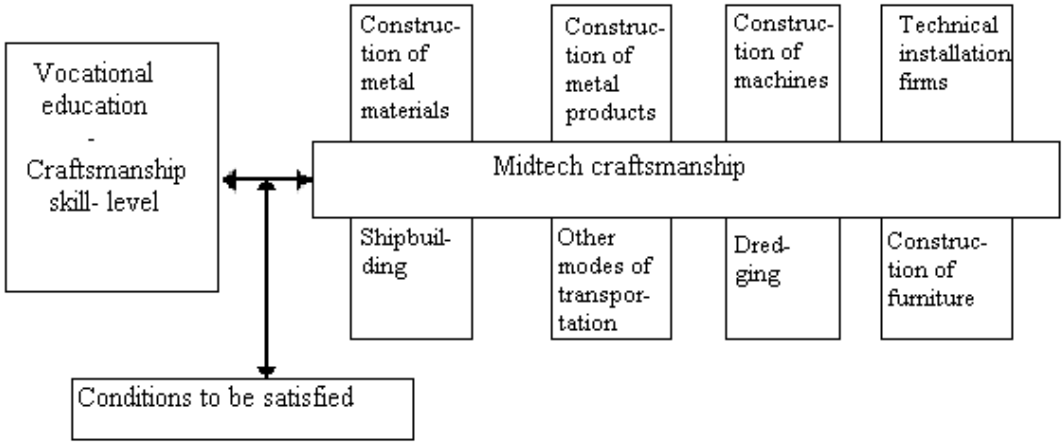
Figure 5: Company structure of firms in the midtech sector



The midtech sector can be related to firms within the manufacturing of rubber and synthetic materials, manufacturing of metal materials, manufacturing of metal products, manufacturing of machines and other equipment, dredging industries, installation, construction of furniture, construction of cars and other transportation uses (in Rotterdam especially the construction of ships). It is expected that in these industries the midtech production level is the core business of the firms and the midtech personnel forms the largest part of their workforce. This workforce is expected to require high value craftsmanship, in which experience and higher level vocational training plays a large role (Colo, 2010). It is also expected that in these industries you learn by doing, by trial and error, which is an important aspect of midtech skill level.

Figure 6 represents the expectation of the midtech sector in the region. The sector is expected to match the craftsmanship skill level of the potential workforce. The midtech craftsmanship is part of many industries in Rotterdam. In these industries the craftsmanship is most important for the end- product of the firm and in which the workers form the biggest part of the business.

Figure 6: Occupational- industrial structure in the midtech sector



3.3 Factors illustrating the economic potential of the midtech sector

Paragraph 2.4 already showed that you cannot just pick a certain sector which you will target. It is important that the sector has economic potential. As paragraph 3.2 showed the midtech sector is expected to have economic potential. The economic potential cannot be measured through current business start ups or job creation, because it is an expectation about the future. It is however possible to look at the coherence between certain factors that illustrate economic potential. For example, it is possible to give an indication about the investments currently made in the sector, because current investments will have economic consequences in 5- 10 years from now. These investments can be seen in the field of innovations and in physical infrastructure and in outsourcing. Job creation can be seen as an expectation of economic potential in the sector in the near future. Firms will not hire people in advance for a period of 10 years, because the market might unexpectedly change. But they do want to be prepared for expected growth. Therefore job creation can be an indicator for economic potential in the short term.

3.3.1 Clustering

Clustering has a lot of advantages as discussed by Porter (1990), such as the availability of a labor pool, suppliers- buyers in the vicinity of the firms and possibilities for cooperation in innovativeness. Therefore it is good to know whether the midtech sector clusters spatially and why. Based on the information of Figure 4, most midtech firms are located in the Rijnmond region. It is therefore to be expected that the firms also cluster spatially in this region. It is also important to know whether this cluster operates regionally, nationally or internationally. When operating internationally the cluster gathers additional value which increases the importance of the cluster for the city of Rotterdam and the region.

3.3.2 Investment in innovation- new markets

Investment in innovation or new markets is a long term process. It means investment now with a certain expectation about the future. Investment in innovation and new markets is important to reduce the risk of declining markets in the future. In addition, it allows the market to keep the highest knowledge level, for example in craftsmanship, and secure a competitive advantage over other regions.

Looking at the city of Rotterdam it is for them especially important that investments are made in clean technology and durability (Municipality of Rotterdam, 2010A and Municipality of Rotterdam, 2010B). New markets in sustainability are in accordance with the strategic

vision of the city of Rotterdam. It would be best for the midtech sectors that new markets fit this clean delta technology vision.

3.3.3 Investment in physical infrastructure

Another long term investment that illustrates economic potential is investments in physical infrastructure. Investments in buildings, roads or location plants by the company itself results in a certain commitment to that area. Without commitment to the area, the company can easily leave and locate elsewhere. Obviously it is important for Rotterdam that the midtech sector and its possible new markets establish themselves in the Rotterdam Rijnmond- Drechtsteden area.

3.3.4 Investment in outsourcing

For having economic potential in a region it is important firms are located there, because firms invest (capital) and supply jobs which increase income of a region. The technological and manufacturing industry is at risk of being outsourced to Asia, because of the cheaper labor there. The technological and manufacturing sector however represents a large part of the midtech sector. It is therefore important to know whether companies expect certain parts of the firms to be relocated to Asia. Especially with regard to the midtech sector in which craftsmanship plays a very important role. The craftsmanship in the Western world and especially Rotterdam, is built by years of experience and leading roles in high quality craftsmanship. It is only when Asia is able to offer the same quality craftsmanship than the midtech sector is expected to be at risk for outsourcing. This stresses the importance of innovation in new markets and keeping the quality of the craftsmanship level very high.

3.3.5 Creation of jobs- Craftsmanship

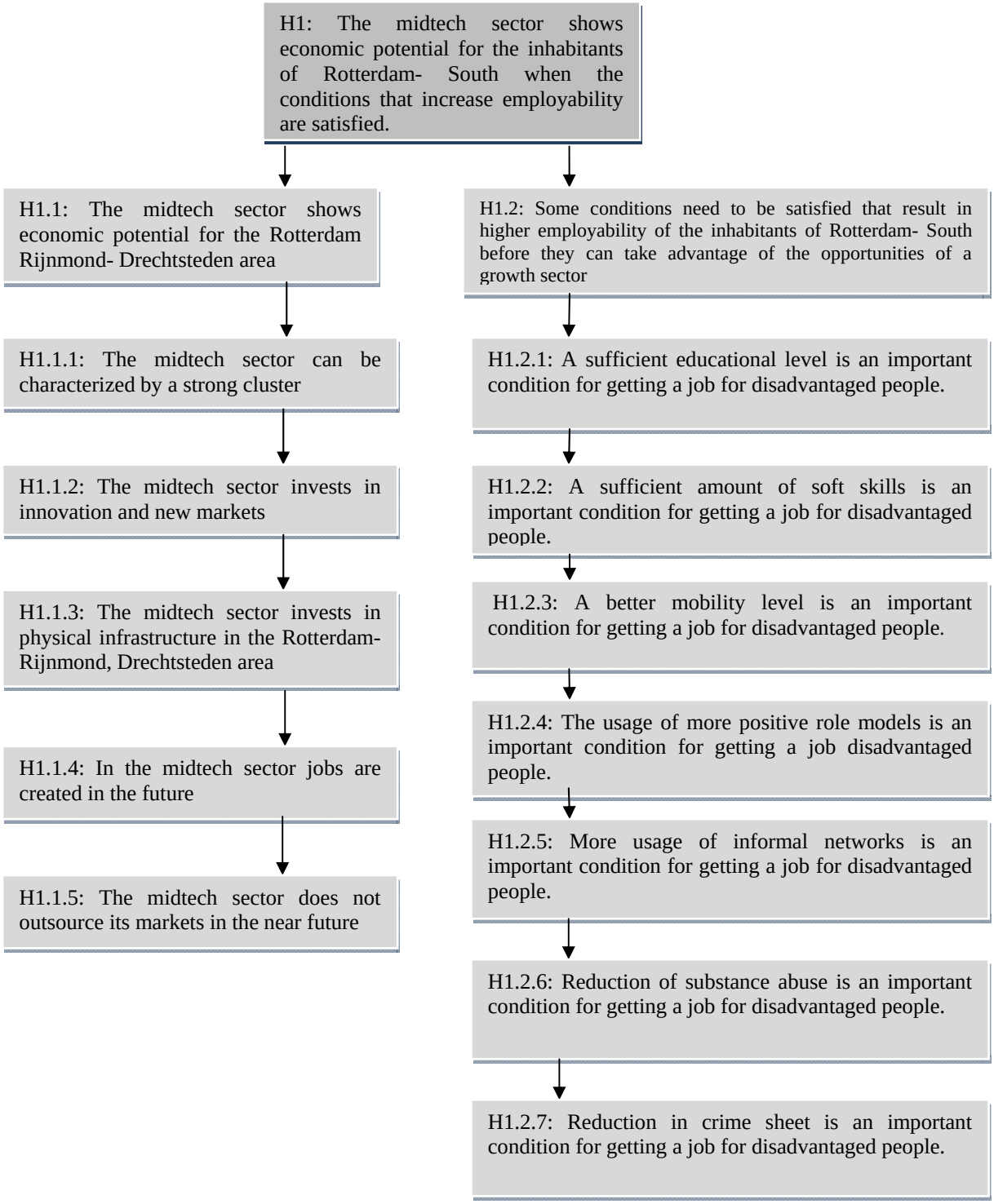
Investing in employees is usually a short term focus as opposed to investments in innovation and new markets which are long term investments. It does however show that in this sector growth is expected and to anticipate on this people are being hired to accompany the growth in the future. An increase in jobs also shows that a sector has economic potential, namely when a firm is growing it will need more employees. Both growing firms and more jobs indicate that a sector is doing well.

For the city of Rotterdam it is very important jobs will be created for the residents of Rotterdam and Rotterdam- South in particular. In the new coalition agreement the labor market and education have high priority (Municipality of Rotterdam, 2010B). Because the craftsmanship skill is important in the midtech sector, and represents the skill level of the

residents of Rotterdam- South, it is very important to know that the craftsmanship level is needed and possibly shows a growing demand for jobs in the future.

3.4 Hypotheses

In line with chapter 2 and paragraph 3.1, 3.2 and 3.3 the following hypotheses will be analysed in the empirical part. The hypothesis 1.1 represents the first part of the research question and will be answered in chapter 4. Hypothesis 1.2 represents the last part of the research question and is answered in chapter 5. The central hypotheses H1, represents the research question is answered in chapter 6.

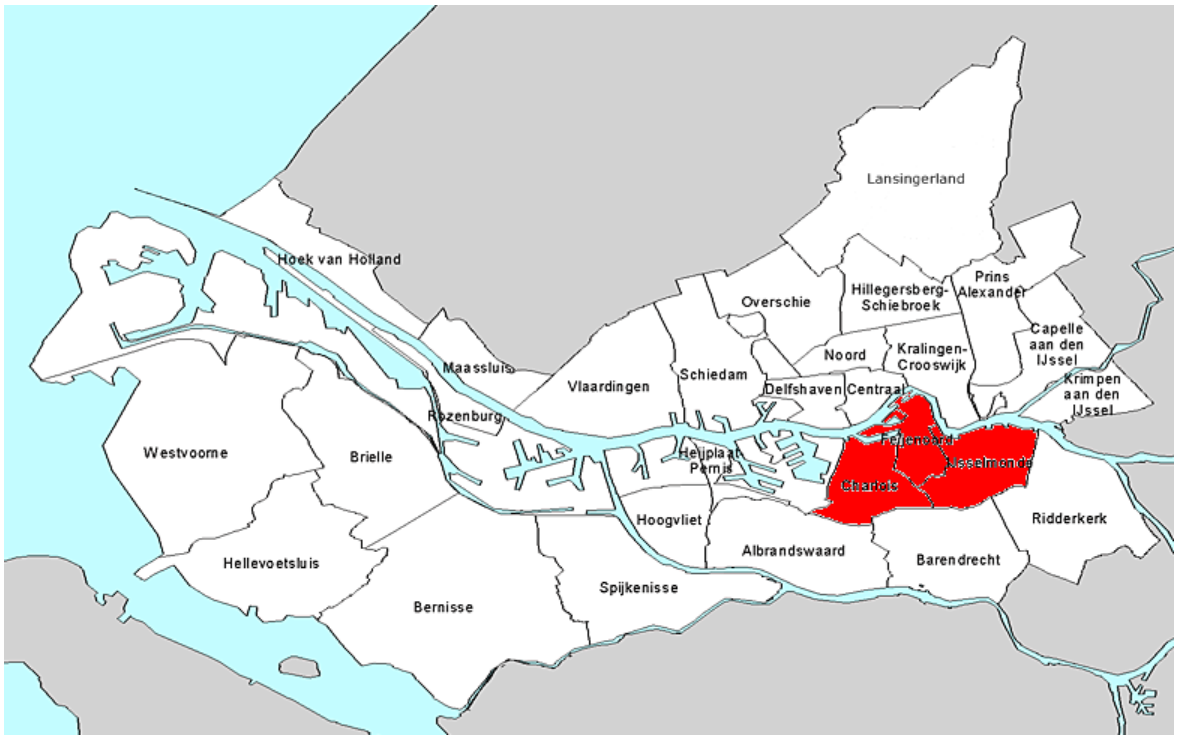


3.5 Geographic scope

The geographic scope of this research is twofold. For the matching of labor supply with demand for labor in the midtech sector the research focuses on the inhabitants from Rotterdam- South. However when looking at the companies that demand labor in the midtech sector a broader scope is taken than just the Rotterdam- South area, namely the Rotterdam-Rijnmond and Drechtsteden area is taken into account. People are mobile and do not have to work in the same place they live. Especially, when looking at Picture 1, it shows that Barendrecht is closer to Rotterdam- South as for example the Maasvlakte or Botlek. When knowing that a cluster of midtech firms is present in the Drechtsteden area it is important to take this into account for the scope of the research. It is expected however that people from a distressed area, such as Rotterdam- South, do have a limited job search and mobility reach, as paragraph 2.3 illustrated. Therefore the boundary Rijnmond- Drechtsteden is expected to be the boundary to be the job search reach for the inhabitants of Rotterdam- South.

The Rotterdam-South area is the area of focus in terms of labor supply. This area represents the following boroughs and their corresponding districts (see Table 1) (PoZ, 2008). To understand where these areas are located Picture 1 illustrates the boroughs of the IZoZ program in the Rotterdam- Rijnmond region within the red-marked area.

Picture 1: Pact op Zuid area within the city region of Rotterdam area



Source: map from MSRonline, 2010, adapted by author.

Table 1: Boroughs and districts, part of IZoZ

Borough	District
Charlois	Carnisse
	Heijplaat
	Oud- Charlois
	Pendrecht
	Tarwewijk
	Wielewaal
	Zuidplein
	Zuidwijk
Feijenoord	Afrikaanderwijk
	Bloemhof
	Feijenoord
	Hillesluis
	Katendrecht
	Kop van Zuid- Entrepot
	Noordereiland
	Vreewijk
IJsselmonde	Beverwaard
	Groot- Ijsselmonde
	Lombardijen
	Oud- Ijsselmonde

Source: PoZ, 2008, p. 34, 70 and 102, adapted by author.

4 Economic potential of the midtech sector

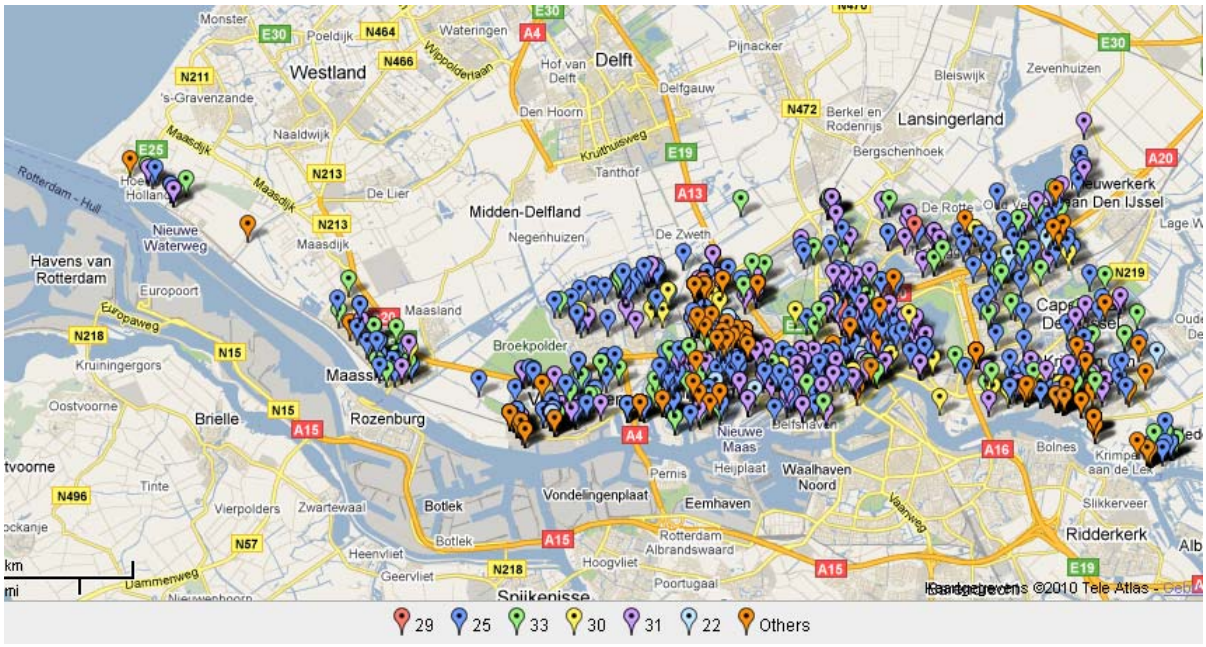
This chapter presents the economic potential of the midtech sector. The current location pattern of midtech firms is discussed in paragraph 4.1. The location of most jobs in the midtech sector in the city of Rotterdam is illustrated in paragraph 4.2. Thereafter the economic potential of the midtech sector will be identified through investments in innovation and new markets, investment in physical infrastructure, outsourcing and employment creation in paragraphs 4.3 until 4.7. The information in these paragraphs is based on the information received from 23 interviews with companies in the midtech sector and an interview with the industry organization. Paragraph 4.8 summarizes the opportunities and threats for the region via a SWOT analysis and determines the economic potential of the midtech sector. The chapter ends with a conclusion in paragraph 4.9.

4.1 Location pattern of midtech sector

Figure 4 in paragraph 3.2 already showed that most firms in the midtech sector can be found in the Rijnmond region. Figures 7 and 8 (p. 37) show the current location pattern of the midtech sector in the Rijnmond- Drechtsteden region. Figure 7 shows the location pattern on the northern side of the Rotterdam- Rijnmond area above the river Meuse. Figure 8 shows the location pattern on the southern bank below the river Meuse. Both figures show a scattered and thick web of midtech firms. In both areas the most often occurring group is the construction of metal products. Figure 9 (p. 38) shows the location pattern only on the Pact op Zuid area. Here, it is clearly visible that most firms are located near the water. Apparently most industrial sites are located near the waterfront. Again the most occurring group of firms is the construction of metal products. Figure 10 (p. 38) shows which key players in the midtech sector are located in the Rotterdam- Rijnmond, Drechtsteden area. These are the key players that are drawn from a list of the 200 biggest employers of the Rotterdam/ Rijnmond, Drechtsteden area.[2] Figure 10 shows that a small cluster (in shipbuilding and dredging) is present in the Drechtsteden area. The figure also shows that more large employers are located in the southern part of Rotterdam and less in the northern part of Rotterdam.

[2] KVK, 2010, Data on request: The 200 biggest employers of the region, without the governmental organizations.

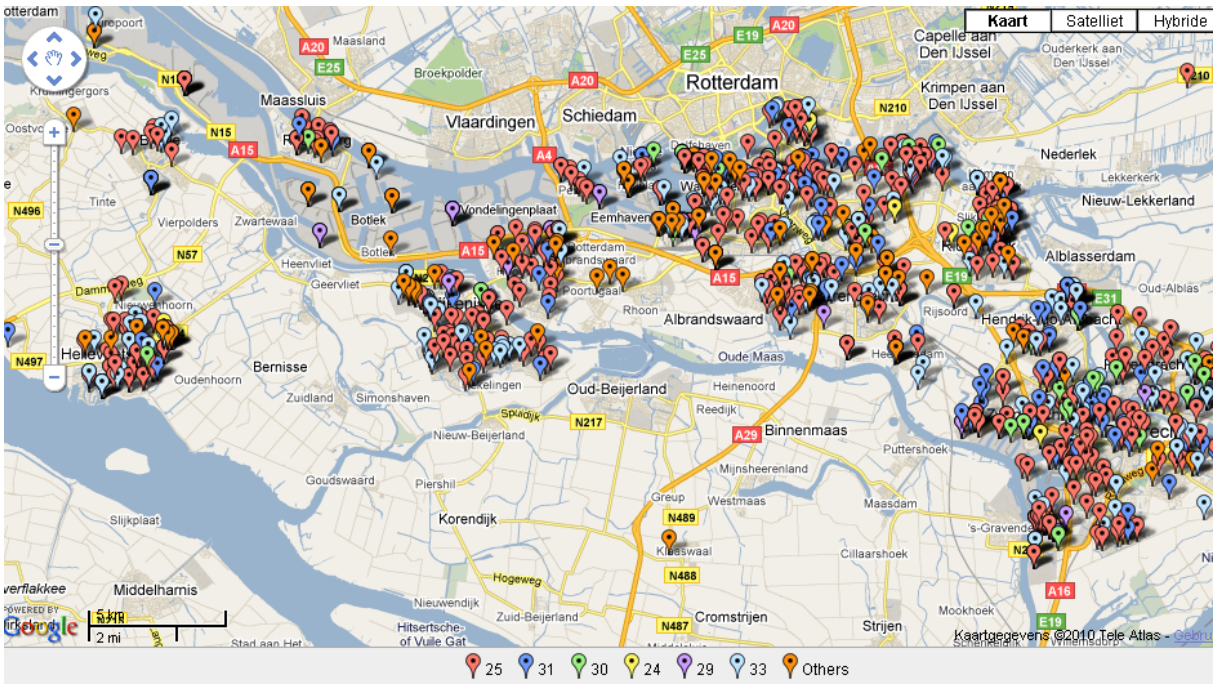
Figure 7: Northern part of Rotterdam Rijnmond- Drechtsteden region



Source: data on request from KVK Rotterdam (2010), map from: www.batchgeo.com, adapted by author

22: manufacturing of rubber and synthetic material, 24: manufacturing of metal, 25: manufacturing of products of metal, 28: manufacturing of machines and other materials, 29: manufacturing and repair of cars, 30: manufacturing of other modes of transportation, 31: manufacturing of furniture, 33: repair and installation of machines, 4291: dredging industries

Figure 8: Southern part of Rotterdam Rijnmond- Drechtsteden region



Source: data on request from KVK Rotterdam (2010), map from: www.batchgeo.com, adapted by author

22: manufacturing of rubber and synthetic material, 24: manufacturing of metal, 25: manufacturing of products of metal, 28: manufacturing of machines and other materials, 29: manufacturing and repair of cars, 30: manufacturing of other modes of transportation, 31: manufacturing of furniture, 33: repair and installation of machines, 4291: dredging industries

Figure 9: Location pattern midtech sector on Pact op Zuid area

Source: data on request from KVK Rotterdam (2010), map from: www.batchgeo.com, adapted by author

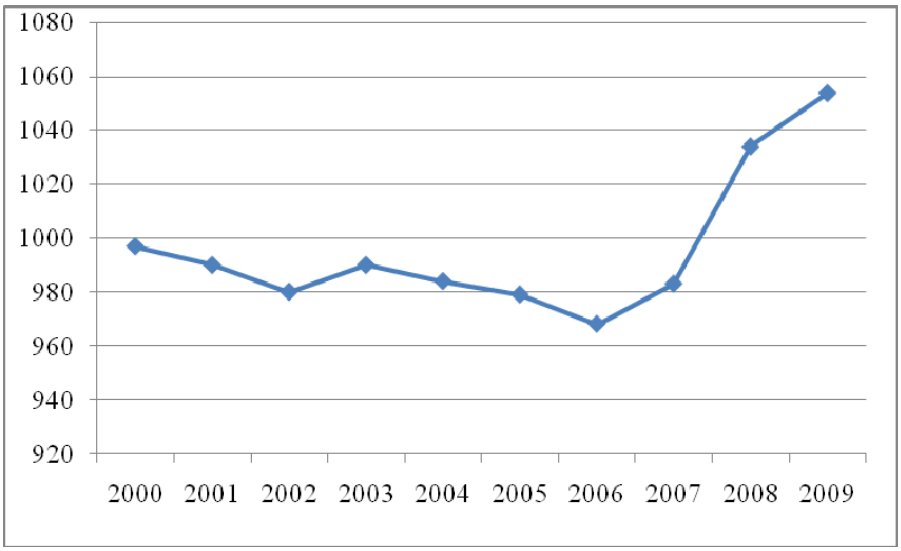
22: manufacturing of rubber and synthetic material, 24: manufacturing of metal, 25: manufacturing of products of metal, 28: manufacturing of machines and other materials, 29: manufacturing and repair of cars, 30: manufacturing of other modes of transportation, 31: manufacturing of furniture, 33: repair and installation of machines, 4291: dredging industries

Figure 10: Key midtech firms located in Rijnmond- Drechtsteden area

Source: data on request from KVK Rotterdam (2010), map from: www.batchgeo.com, adapted by author

Figures 7 until 10 show the current location pattern of the midtech firms in the Rotterdam region. Figure 11 shows the development in the number of firms in the midtech sector in the Rotterdam city region. The figure illustrates a rapid increase in the number of firms since 2006. The number of firms in the midtech sector increased by 5.7% in the Rotterdam region in the period of 2000- 2009.

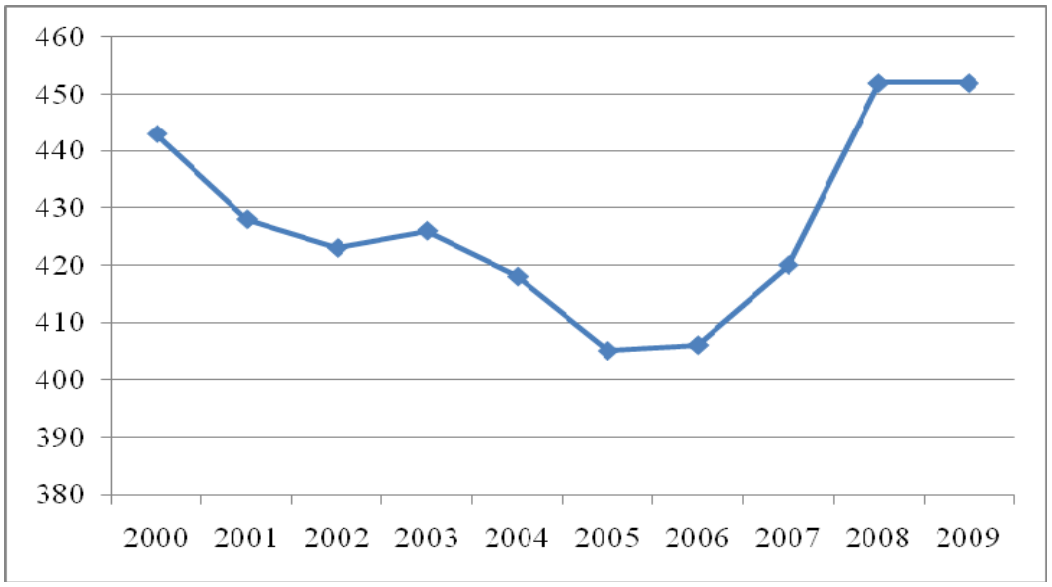
Figure 11: Number of firms in the midtech sector in the city region Rotterdam 2000- 2009



Source: Berijvenregister Zuid- Holland, adapted by author.

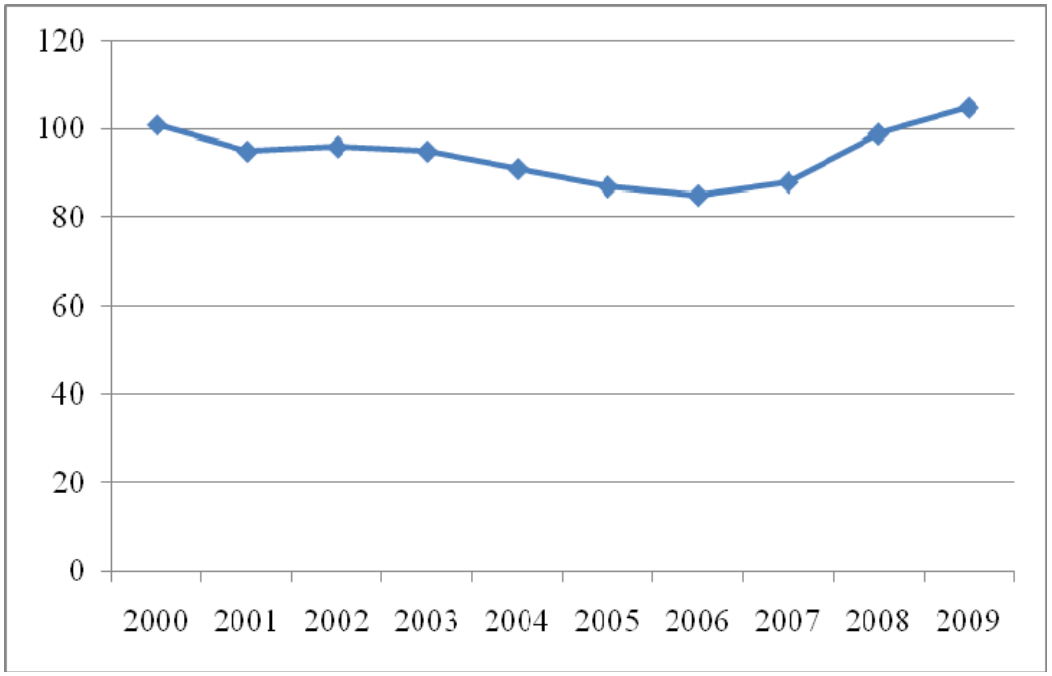
In the city of Rotterdam the increase in number of firms is only 2% in the period 2000- 2009 (see Figure 12, p. 41). Figure 13 (p.41) illustrates an increase of 4% in the number of firms in the Pact op Zuid area from 2000- 2009. The growth in the number of firms is bigger in the Pact op Zuid area than in other parts of Rotterdam. This can be explained by the structure of this region. This area has a lot of production sites located near the waterfront. Many midtech industries need a location near the waterfront, such as ship construction, dredging industries and construction of metal industries. Moreover the Pact of Zuid region is close to Waalhaven/ Hoogvliet which are also important locations for midtech firms as will be illustrated later.

Figure 12: Number of firms in the midtech sector in the midtech sector in Rotterdam, 2000- 2009



Source: Bedrijvenregister Zuid- Holland, adapted by author.

Figure 13: Number of firms in the midtech sector in the Pact op Zuid area, 2000- 2009



Source: Bedrijvenregister Zuid- Holland, adapted by author.

The view that the Waalhaven is an important area in terms of number of midtech firms located in that borough is supported by Table 2. The table illustrates the percentage of firms located in Rotterdam divided by borough. The table shows that 54% of the firms in the midtech sector were located in the northern part of Rotterdam in 2000. In 2009, this has declined to 52%. On the other hand, the southern part of Rotterdam saw an increase in the number of firms in the midtech sector. The most important borough in the northern part, Spaanse polder, is declining in importance for the midtech sector. The most important boroughs in the southern part of Rotterdam are increasing in importance for the midtech sector, namely Waalhaven and Charlois.

Table 2: Percentage of firms per borough in 2000 and 2009

Borough	2000		2009	
Hoek van Holland	0,89%		1,10%	
Bedrijvenpark RNW	4,23%		5,92%	
Nieuw Mathenesse	1,56%		1,10%	
Spaanse Polder	12,47%		10,31%	
Prins Alexander	6,01%		7,68%	
Hillegersberg- Schiebroek	5,57%	54,47%	5,26%	51,97%
Kralingen- Crooswijk	5,57%		3,73%	
Overschie	6,01%		2,63%	
Noord	4,23%		4,17%	
Delfshaven	5,35%		6,14%	
Centrum	2,67%		3,95%	
IJsselmonde	7,13%		6,58%	
Feijenoord	6,46%		5,48%	
Charlois	6,01%		8,33%	
Waalhaven	12,92%		14,04%	
Hoogvliet	5,12%	45,43%	6,14%	48,03%
Pernis	0,67%		1,32%	
Rozenburg	0,67%		1,54%	
Europoort	6,01%		4,61%	
Vondelingenplaat	0,45%		0,00%	

Source: Bedrijvenregister Zuid- Holland, adapted by author

4.2 Labor intensity of the midtech sector in Rotterdam

Besides the number of firms and their location pattern in the region it is also interesting to know where the most labor intensive firms are located. This is interesting because some

boroughs might seem important for the midtech sector in number of firms but do not offer many jobs in these firms. For the municipality job opportunities for their inhabitants are very important and therefore it is necessary to show where most labor intensive firms are located. Due to the lack of data it is only possible to specify this for the city of Rotterdam itself and not for the entire region. Table 3 shows the labor intensity in the midtech sector in Rotterdam. Table 2 showed that the number of firms is divided almost even between the northern part and the southern part of Rotterdam. The labor intensity of the midtech firms is divided differently between the northern and southern part of Rotterdam. The number of employees working in the southern part of Rotterdam is much higher than the amount of employees working in the northern part of Rotterdam in the midtech sector. In 2009, 68% of all employees in the midtech sector in Rotterdam worked in the southern part of Rotterdam while only 48% of firms are located in this area.

Table 3: Percentage of employees working in Rotterdam per borough in 2009

Borough	**2000**		**2009**	
Hoek van Holland	0,54%		0,90%	
Bedrijvenpark RNW	3,07%		3,44%	
Nieuw Mathenesse	0,86%		0,55%	
Spaanse polder	9,69%		12,38%	
Prins Alexander	7,85%		7,71%	
Hillegersberg – Schiebroek	1,85%	29,17%	1,69%	32,17%
Kralingen Crooswijk	0,96%		0,93%	
Overschie	1,77%		1,29%	
Noord	0,58%		0,95%	
Delfshaven	1,16%		0,76%	
Centrum	0,83%		1,58%	
Ijsselmonde	7,58%		3,70%	
Feijenoord	9,31%		9,01%	
Charlois	8,25%		8,40%	
Waalhaven	25,71%		25,38%	
Hoogvliet	4,08%	70,83%	3,04%	67,85%
Pernis	0,23%		0,40%	
Rozenburg	0,18%		0,14%	
Europoort	14,18%		17,75%	
Vondelingenplaat	1,30%		0,00%	

Source: Bedrijvenregister Zuid- Holland, adapted by author

As became visible in Table 2 the share of firms on the southern part of Rotterdam is increasing. At the same time the share of employees is decreasing according to Table 3. This decrease in share of employees can be explained by a huge decline of employees in

IJsselmonde (see Table 3). Going back to Table 2 the number of firms declined slightly in IJsselmonde. The decline in number of employees can be explained by a large firm that went bankrupt and closed.

4.3 Clustering

The firms in the midtech sector are very diverse. Most companies in the midtech sector in the Rijnmond- Drechtsteden region are related to the port of Rotterdam (70% of the companies interviewed).[3] Some directly, through the construction and repair of ships and the repair of containers (38% of the port related companies interviewed). Others are more indirectly related to the port of Rotterdam through the metal or machinery industry. These firms construct parts or machines for companies in the port of Rotterdam (62% of the companies interviewed). The non- port related midtech group can be further diversified in metal and machinery for industries non- port related, the construction of furniture, firms in the electrotechnology and firms in the construction of other modes of transportation besides ships (30% of the interviewed companies).

Reason to locate in Rotterdam

Of the midtech firms related to the port of Rotterdam all indicate that one of the main reasons to be located at their current location is the vicinity of the water. They also indicate that besides the water the presence of the industrial cluster is a very important reason to locate in the Rotterdam region. More precise this means that the presence of other firms in this area and the presence of a large group of possible employees in the region is important.

The midtech firms non- related to the port of Rotterdam indicate they want to be located in the industrial region. The electrotechnical firms want to be located here due to the presence of a market of many companies with a lot of industrial installation projects. The companies related to the furniture construction chose this region because of the presence of a workplace and a shop combined. The reason to choose Rotterdam is that the city offered space for creative people.

Subcontracting

Many of the key players in the midtech sector have small subcontractors in the region which deliver high quality products. 73% of the SME's interviewed often receive projects of a key

[3] Most midtech companies in the region are in the construction of ships and metal industry supplying firms in the port (data KVK, 2010). Therefore this group of interviewed firms represents a fair division between the midtech firms from different sectors.

player in the region. The SME's acknowledge the dependence on the key firms as a considerable risk, because if the key firms leave they will have a problem of getting enough projects. Especially for the port related companies subcontracting in the region is very normal. The key players need to be able to offer high quality products in a limited amount of time to be able to have a competitive advantage over Asian companies. With the help of the SME's from the region the key player is able to produce quicker and of higher quality. This cooperation of firms strengthens the position of the cluster, but also again illustrates the risk of the cluster. Without the key players the SME's cannot survive. At the same time without SME's some of the key players cannot deliver as fast and lose its competitive edge. Also between SME's and between key players subcontracting is a regular activity.

The construction of furniture market is an exception. These companies do not cluster spatially because of the proximity of firms or personnel. They also only deliver work for each other in exceptional cases.

Regional, national and international buyers

The midtech cluster produces for the regional, national and international markets. Many SME's have, in order to stay competitive in the future, been able to find a specific niche market. In these markets, which are often very small, they have build up a reliable image and therefore they now operate in the world market. 33% of the SME's interviewed have been able to do so. All key players, except the elektrotechnical firms, operate internationally on a regular basis. The elektrotechnical firms install elektro in business locations and on industrial sites, which is a more regional or national activity.

Additional value of the midtech cluster

69% of the port related midtech firms are directly or indirectly related to the petrochemical complex in Rotterdam. The petrochemical complex causes a lot of additional value for the city and the region. The midtech firms produce parts, machines, maintenance and repair for the petrochemical complex. The midtech firms strengthen the position of the petrochemical cluster, because the petrochemical firms can better operate with these companies in the vicinity of the port. Indirectly the petrochemical cluster thus offers many jobs in the midtech sector.

As indicated a strong cluster in midtech related operations is present in the Rotterdam region. All port related firms that are interviewed indicate that it is good to be located here due to the presence of a cluster of firms and possible employees. The cluster is currently strong because

the SME's are able to strengthen the competitive position of the key players and the cluster itself. Moreover many SME's recently start to operate internationally and therefore increase the additional value of the midtech sector. A final strength of the cluster is that it is able to strengthen the petrochemical cluster, a cluster that is also very important for the additional value for the port of Rotterdam and its region.

The non port related firms want to be located in the Rotterdam region because this is an industrial centre in the Netherlands with a lot of companies located here (subcontractors and clients).

H1.1.1: The midtech sector can be characterized by a strong cluster	Accepted

4.4 Investment in innovation and new markets

To be ready and healthy for the future firms need to find and invest in new markets and innovate. For the potential of the region it is important that these new markets will locate in this region. Moreover innovativeness can offer companies a world leading position which obviously strengthens the position of the firm but also that of the cluster and region.

The key players in the region indicate that it is very important to invest in new markets. For the key players innovation and investment in new markets is a regular part of their strategy plan. Currently, investments are made in innovation in clean energy such as wind parks on sea. Other examples of new markets include increasing the durability of airplanes, towing boats, firms (in terms of their energy usage) is a new market in which many actors are interested.

The port related SME's are less involved in innovation as part of their strategy plan. They are often delivering parts and machines to other companies and do not continuously innovate in wholly new markets. Most SME's have recently chosen a specific niche market. In this niche they are now specializing in order to produce more high quality products and have a competitive advantage over low cost countries. Some SME's have been very successful and operate all over the world. This type of getting in a new market is less planned than the key players in the midtech sector do. All of the port related SME's interviewed operate in a niche market. They indicate to have chosen this niche because of getting a competitive advantage.

Most key players indicate their innovation will take place in this region, because of several reasons. They indicate that their first models need to be worked out over and over again. This has to be done here for quality control and knowledge. If the production becomes more

standardized it might be outsourced. For example building all parts of a wind park is too expensive in Rotterdam. This requires a large business site which is not available here and too expensive. Instead this region will produce the one of a kind pieces that require more knowledge and precise work.

The innovative SME's are more bound to their locality than the key players are. These innovative SME's are located in this region since the start of the company. When they relocate it will still be in the Rotterdam region for several reasons. First, their employees live in this area. The loyalty towards the employees is considerable. Secondly, they produce for many large firms in the area that are located here. Therefore they want to be in close proximity to these companies.

Innovation level in the midtech sector		
	Innovate	*Innovation will land in*
SME	Mostly during the work process	Rotterdam
Key players	Part of the strategy plan of the company	Early work and one of a kind work in Rotterdam, because of the needed knowledge. Large amounts of the same work will be outsourced.

The midtech craft is very important in the new markets. In the metal industry the materials are very capital intensive. Therefore the market needs good qualified and precise personnel. Since most early work and one of a kind work will be done in the Rotterdam region more knowledge is required here. This is the type of craftsmanship companies still expect to find in this region.

In the elektrotechnical firms the midtech craftsmanship is also very much needed. The craftsmen that install the elektro systems have to do this at the production site. This type of work needs to be done by people and in the Netherlands. With the new markets in elektrotechnology the systems do get more difficult over time which puts a higher demand on the knowledge of the personnel.

Midtech craftsmanship in new markets	
Key player	Very much needed
SME	Very much needed

A risk of the region is that many of the SME´s innovate by luck, as they work. For a market to flourish the innovation strength is very important to survive in the future. The midtech operations should therefore be supported by more high-tech firms. The midtech firms can

operationalize the products a high-tech firm draws. The Rotterdam region however does not have a lot of high tech firms in its region (Platform Betatechniek, 2009). More high- tech firms can strengthen the midtech cluster, because the high- tech innovates and the midtech makes this operational.

Opportunity: Part of the business strategy of the key players is innovating and investing in new markets in which the midtech craft is very much needed **Opportunity:** SME's innovate in creating specific niche markets for themselves and become internationally operating in these niches **Threat:** new market not located in Rotterdam because of lack of motivated personnel and expensive location **Threat:** not many high- tech firms to support and strengthen the midtech operations	
H1.1.2: The midtech sector invests in innovation and new markets	Accepted

4.5 Investment in the physical infrastructure

In order to see whether companies are bound to their location it is possible to look at their investments in that location. This can be in an enlargement of the terrain, change in the building or enlargement of the production area. The investment costs in such an area or building are considerable. Because of this initial investment firms are less likely to move before this investment is at least partly paid off. Another indicator is that companies are satisfied about their location site and are willing to stay or enlarge it in the future.

Many interviewees have just invested in the area and its workspace or have plans in doing so. When companies invested in terrain they did this because their firm is growing and they need more workspace.

Recently invested in terrain or building	
Key players	50%
SME	46%

One of the most critical factors currently in the decision to locate in the Rotterdam region is the future presence of a good workforce. Many of the key players have recently invested in their building because they have problems finding new personnel. By investing in their building they hope to be more visible in the area and more attractive for future employees. The problem with locating in Rotterdam (for port related companies) is that when locating in the Waalhaven/ Heijplaat they are almost out of the port area. Since most port related activity

is more and more going towards the sea. Companies however do not want to relocate to Rozenburg for example because finding personnel is even more difficult at that location. It is further out of the city region and it is difficult to get to by car (traffic congestion), public transport (bad connection) and bike (far away).

The companies in the construction of furniture hope to have more creative clusters in Rotterdam. To accompany more of this type of craftsmen they need bigger workspaces in Rotterdam. In the non- port related elektrotechnical firms work is done at the industrial sites. Therefore they do not have the problem of investments in terrain and production locations, because they usually work on location. For these firms activity of other firms is important because that is where they are needed.

Plans to enlarge or move		
Key player	38%	33% wishes to stay in Rotterdam
		67% wishes to stay in the region (However was already located outside the city of Rotterdam)
SME	40%	67% wishes to stay in Rotterdam
		33% wishes to stay in the region (However was already located outside the city of Rotterdam)

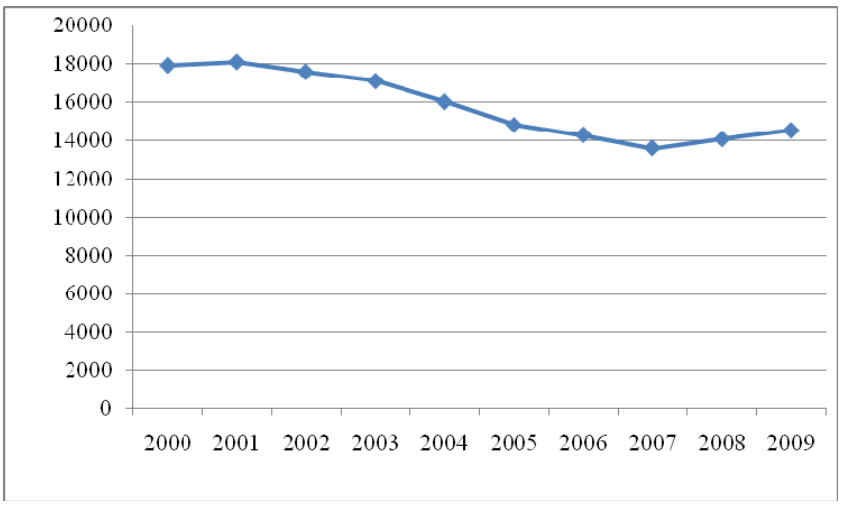
Interestingly most companies are relatively bound to their original location site. This can be explained via the living pattern of their production personnel. The production personnel of the midtech companies almost always lives near the place they work and have a low job reach. If a company leaves its location for a location more than 50 kilometers away, they will have problems taking their personnel with them. When going to a totally new location site they have to find new personnel with the right qualities, which is quite a difficult task. Especially because all the people that work for them have been trained for the specific machines the firm uses. This is also the case for the key firms in the region. They cannot just hire 100 or 200 people when relocating elsewhere. A related difficulty is that many of the production sites of the midtech firms are so firm specific that it is difficult to find a new area that can meet the need of the firm.

Opportunity: Many companies have just invested in the area and wish to stay in the Rotterdam region **Threat:** Companies are not very visible and have therefore even more problems to attract workers	
H1.1.3: The midtech sector invests in physical infrastructure in the Rotterdam- Rijnmond, Drechtsteden area	Accepted

4.6 Employment creation

Paragraph 4.2 already showed the labor intensity of the midtech sector in Rotterdam. It showed that most labor intensive firms can be found in the southern part of Rotterdam. At the same time the midtech sector is characterized by a decrease in personnel since 2000 (see Figure 14). However since 2007 an increase in personnel is again seen. This can be explained by the steep increase in the number of firms in the sector, as Figure 11- 13 illustrated.

Figure 14: Total number of employees in the midtech sector



Data: Bedrijvenregister Zuid- Holland, adapted by author

The decrease in personnel is in line with the information received from the interviews with the key players. Many of the key players had a bigger labor force in the past. They indicate they have discharged production personnel through the years. This type of labor was automated or outsourced to Eastern Europe or China. It should be noted that this type of labor is often not the midtech related craftsmanship, but the lower production work. This type of work requires automated operations with limited work for workers which is more expensive in the Netherlands. The midtech craft requires more quality and often requires making unique products. A machine cannot make these difficult one of a kind pieces that requires solutions on the spot.

The decline in personnel can, according to the information from the interviews, be explained by a decrease in the amount of workers for the lower production work. The real midtech personnel, which have acquired more knowledge about their craft by trial and error, are still very much needed in these companies.

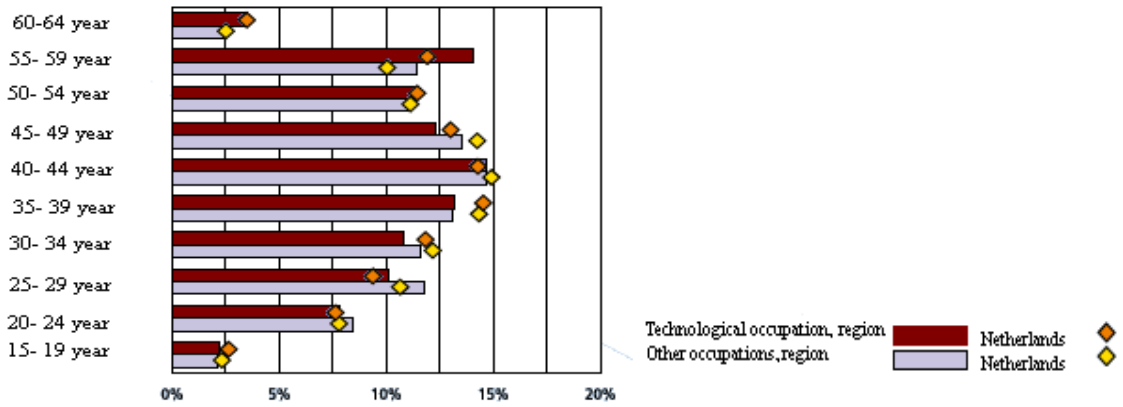
Employment creation is coming from a demand for replacement and an additional demand for labor. The companies indicate that a large additional increase in midtech personnel is not to be expected. They do say that due to the crisis personnel was laid off and if the economic

crisis is over and the market improves additional demand for midtech labor can be expected. However they note that when the market is functioning on a normal basis again it is not to be expected that an additional demand for labor is needed. Some firms are the exception, but these are in a specific niche growth market. This makes them able to increase the amount of midtech labor. Other interviewed firms that want to increase their personnel do this in the higher levels of education, namely in the engineering part.

Additional demand for labor in midtech sector	
Key firms	38% expects an increase in midtech personnel
SME's	40% expects an increase in midtech personnel

As already indicated besides the additional demand also the replacement rate has to be incorporated to indicate the employment creation in the near future. In the midtech sector the amount of people that will retire in the near future is very high. Many firms in the technological industry have a very old labor force. As Figure 15 indicates the replacement demand is very high in the Rotterdam region. Many people in technical occupations are older than 40 while for other types of employment the age structure is more spread equally over all age groups. The amount of people of 55- 59 years old in technical occupations is larger in Rotterdam than average in the Netherlands.

Figure 15: Age structure of employees at companies per type of occupation



Source: Platform Betatechniek (2009), p. 50, revised by author.

78% of all interviewed companies explained they have a large group retiring the coming 5 -10 years. Of those companies with a large need for replacement in the future 83% expects to fulfill the whole replacement demand in the midtech related jobs. The firms that do not expect to fulfill the places of retired personnel with new personnel want to make a change in their

business strategy and focus on other products. The companies that have less problems with retirement of their production personnel are the companies that have already begun anticipating on this problem some years ago. They already hired young workers to pass on the knowledge of the elder which would retire the coming years.

Replacement demand	
Key player	75% has a demand for replacement
SME	80% has a demand for replacement

Planning to fulfill the entire replacement demand	
Key player	67% thinks to fulfil the entire need for replacement with new personnel
SME	92% thinks to fulfil the entire need for replacement with new personnel

All interviewed companies indicate their midtech personnel is living in the vicinity of the firm. The companies in Dordrecht/ Papendrecht for example do not have a lot of personnel from Rotterdam. Firms in Rotterdam have employees living in Rotterdam, Schiedam, Vlaardingen, Spijkenisse, Barendrecht or Ridderkerk. Working “across the water” or towards the Drechtsteden is less usual. The companies think this is due to the low area of search of their production personnel. Many youngster come to a firms they know when they are 18 years old and never leave the company until they retire. The companies they know are usually the companies that are close to their home.

To conclude the amount of employment creation will be high in the midtech sector during the coming 5- 10 years according to the information received from the interviews. The demand for employment creation comes from the demand for replacement due to retirement of the current workforce. Besides the demand for midtech personnel also the additional demand for higher educated technical workers is expected to increase.

Opportunity: a high demand for labor due to retirement of current personnel **Weakness**: a low additional demand for midtech personnel **Threat:** a lack of (qualified) personnel in the near future to fulfil the replacement	
H1.1.4: In the midtech sector jobs are created in the future	Accepted

4.7 Risk of outsourcing

60% of the key players and 50% of the SME's that are interviewed indicate that the high quality level of the midtech personnel is one of the strengths in the Rotterdam- Rijnmond region. This high quality level makes it difficult to outsource the whole production process to other countries. This is partly because of the lower quality level abroad according to 48% of the interviewed companies. Moreover in many midtech firms, for example the metal industry, it is important to have a close quality control because of high capital intensive materials. This makes the firms even more reluctant to outsource because the costs of failure are very high or the quality control costs combined with the transport cost become too high.

Of the key firms 38% currently outsources or has plans to outsource parts to foreign countries. These parts require a lower skill level and often involve automated activities. The midtech skill involves the finishing of products, which requires higher quality and high class knowledge. This is done in the Netherlands. The firms that do not outsource are in the maintenance/ elektro market, this cannot be outsourced because the products need to be repaired and installed here.

Only 6% of the SME's expects to outsource parts to other countries. The most important reason for this small percentage is that many firms are convinced the Netherlands should keep its qualities here. The firms that do expect to outsource have a daughter company in for example Eastern Europe. This makes it possible to have a good quality control.

Even though outsourcing in the midtech craft might not be a big threat currently, it might become one in the near future. All companies indicate that it is harder to get new (motivated) people. When it is not possible to get motivated personnel with the right qualities many of the companies find it more interesting to be thinking of outsourcing. At the same time there is a considerable threat that the quality of the Dutch craft declines if no new midtech personnel is present in the coming years. This makes the industry more vulnerable towards outsourcing and leaving the Rotterdam region.

Threat: outsourcing midtech craft because of a decline of personnel and knowledge **Reason to stay in the Netherlands**: quality level, mentality, quality control and finding a good partner abroad. **Reason to leave the Netherlands (besides expensive labor):** motivated personnel is gone, quality of craftsmanship declines	
H1.1.5: The midtech sector does not outsource its markets in the near future	Accepted

4.8 Economic potential of midtech sector

From paragraph 4.1 – 4.7 it can be concluded that the midtech sector in the Rotterdam region has several strengths and offers a lot of opportunities. But also some weaknesses and threats are visible. These are summarized in a small SWOT analysis in Figure 16.

Figure 16: SWOT of the midtech sector in Rotterdam region

Strengths	**Weaknesses**
Most companies in the midtech sector are located in this region, High craftsmanship level, Good mentality of current workforce, Strong representation of key firms in the region which are relatively bound to the region, Strong positive image of the region, A lot of subcontracting between key firms and SME's – which strengthens competitive position, Companies invest in new markets,	Not a large presence of high-tech firms in the area to support the midtech operations, Dependency of SME's on key firms in region, Low additional demand for labor,
Opportunities	**Threats**
High replacement demand, Innovation in niche markets for SME's in particular, Investment in new markets, Keep highest quality level to strengthen the competitive advantage,	A lack of qualified personnel in the near future, Motivation of workforce with in accordance the more expensiveness of the workforce, Outsourcing of midtech craft because of no personnel, Space for expansion, Rotterdam's expensive to locate, Companies are less visible in region and have more problems attracting personnel.

The biggest threat for the midtech sector in the region is the lack of qualified personnel and motivation of the potential workforce. All interviewed firms want to stay in Rotterdam and its region, but without available motivated and qualified people it becomes almost obligatory to locate elsewhere. The midtech sector really builds on the availability of the craftsmen and the

quality they bring. This quality level is built by trial and error through the years. Therefore many youngsters that might enter the market have to be helped by an elder to learn the craft. By passing on the knowledge the quality level can be maintained and even expanded. Without the youngsters and new personnel the older craftsmen cannot pass on their craft and the risk that the quality and knowledge built up through the year's declines is considerable.

When the quality in this region declines it becomes more interesting to be thinking about outsourcing, because the strength of the Rotterdam region are the craftsmen with their quality and knowledge. Without this big strength of the region, the key firms in Rotterdam are more likely to outsource parts or entire plants. If some of the key players decide to leave because there is not enough motivated personnel, many SME's in the region will be affected heavily. At the same time, without the high quality SME's in the region the key players lose many subcontractors. Without the subcontractors they are not able to have the competitive advantage of quick delivery of high quality because suppliers and workers are not very close by anymore. Without the cluster of SME's the key players might also leave. In addition to the midtech cluster itself, also the petrochemical cluster is affected when many SME's are gone.

The midtech sector has economic potential not only in creating jobs due to demand of replacement of older personnel by many youngsters, but also due to its position to strengthen the harbor industrial cluster which is one of the growth clusters of the city of Rotterdam. This cluster influences the added value of the city of Rotterdam. In order to strengthen the harbor industrial complex the midtech related activities are of great importance. In terms of quick delivery which increases the competitive strength of the harbor but also in terms of quality of craftsmen.

The biggest threat is that many firms cannot cope with the upcoming retirement. This threat is very acute but with help of the current economic crisis the problems are pushed aside for a little while. When the economy strengthens the scarcity on the market for technical occupations will be high again. The threats should be tackled before the problems become too big to keep the midtech sector, and the industries in it, flourishing and keep them from declining industries.

H1.1: The midtech sector shows economic potential for the Rotterdam Rijnmond- Drechtsteden area	Accepted.

4.9 Conclusion

The midtech sector has economic potential for the Rijnmond- Drechtsteden region for a number of reasons. Firstly, most companies in the Netherlands in the midtech sector are located in the Rijnmond region. Secondly, a strong cluster is present in which the firms are able to strengthen each other in terms of creating a competitive advantage. A big strength of the cluster is the quality level of the craftsmen. As a consequence of this high quality level the cluster operates regionally, nationally but often also internationally. A large part of the midtech sector is very much related to the harbor industrial cluster and is able to strengthen this cluster. This is a third reason why the midtech sector has economic potential. The harbor industrial cluster offers a lot of additional value that is important for the city of Rotterdam. Fourth, many firms have been able to enter a niche market in which they have acquired a competitive postion. These four aspects create such a competitive position for the midtech cluster of the Rotterdam region that the sector currently is not at risk of being outsourced. This in itself makes the economic potential of the midtech sector stronger.

This economic potential is however threatened by a lack of (motivated) personnel. Without enough personnel one of the most important assets of this sector in this region is lost. The cluster might lose its competitive strength. In addition to this, without good qualified personnel Rotterdam becomes too expensive to locate and companies are likely to leave this region for other countries in the world. This is where the youngsters of Rotterdam- South can play such a big role in securing the position of the midtech cluster for the future.

5 Match between demand for labor in the midtech sector and residents from Rotterdam- South

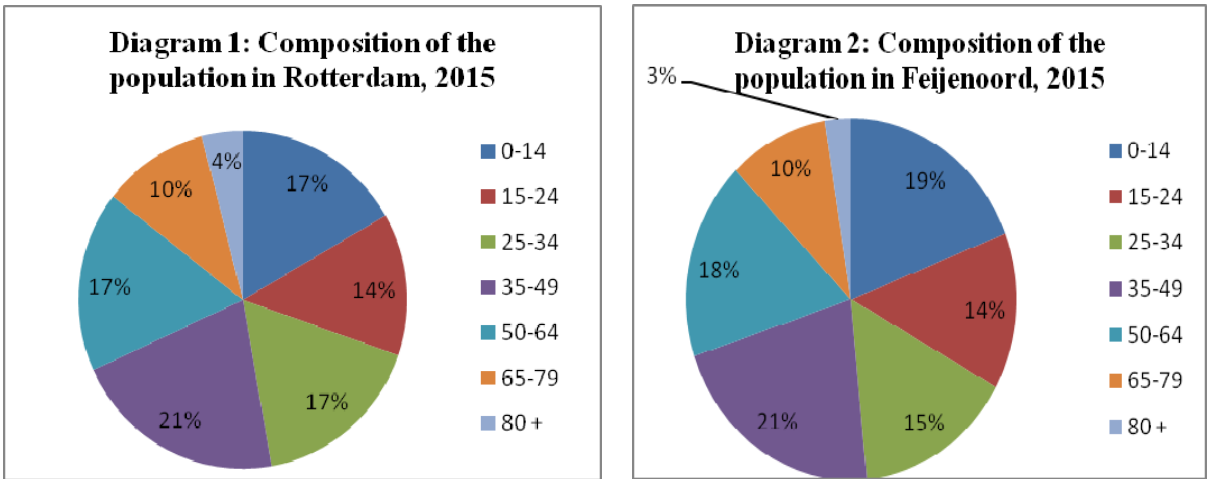
This chapter discusses the possible match between the economic potential of the midtech sector and the inhabitants of Rotterdam- South. The information in this chapter comes from informational sources and from the interviews with the midtech companies and other parties that are engaged in the labor supply market. Paragraph 5.1 shows that the strength of the workforce of the inhabitants of Rotterdam- South lies in vocational education. Paragraph 5.2 shows the demand for midtech labor. The supply of midtech labor is identified in paragraph 5.3. Paragraph 5.4 describes the current mismatch between demand and supply in the midtech sector. The barriers that probably obstruct the current inhabitants of the Rotterdam South area from getting employed are tested through the interviews with employers and labor supply parties, in paragraph 5.5. Paragraph 5.6 ends this chapter with a conclusion.

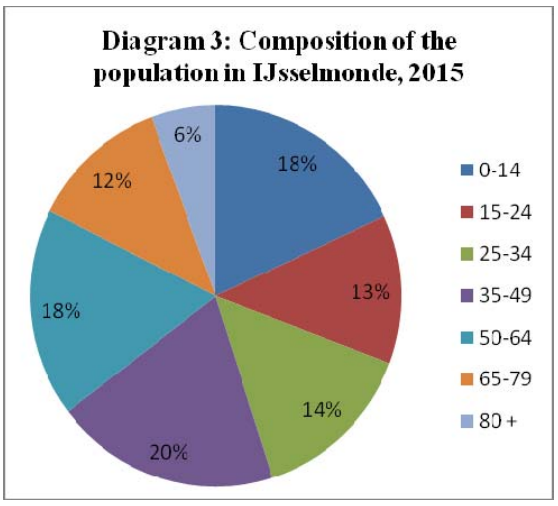
5.1 IZoZ- Strength of the areas workforce

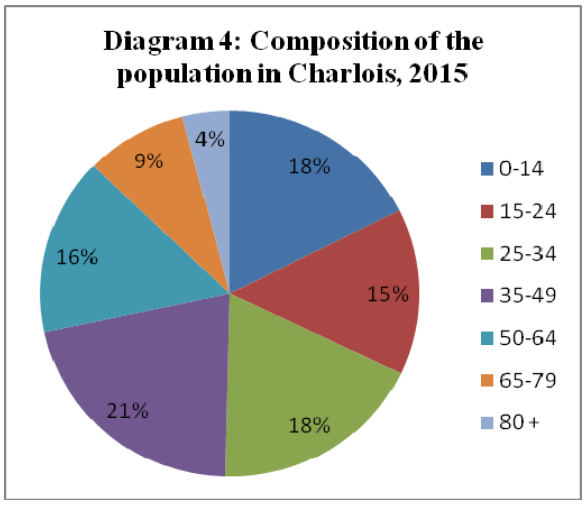
The aim of the IZoZ project is to bring employment for young adults back to Rotterdam-South. This aim of the IZoZ project and that of the municipality of Rotterdam to focus on the youth can be explained by the fact that Rotterdam has a very young population combined with the accompanying ageing of the Dutch population. The Rotterdam- South area is also characterized by a young population. Figure 17 shows that in the age group of 0- 14 the boroughs of the IZoZ program score slightly higher than the average of Rotterdam, in 2015.

In the near future many young people will enter the labor market in Rotterdam- South. This increases the need for the local governmental parties to know what the opportunities are for the youngsters in the region. They will be the employees of the future.

Figure 17: Composition of the population of Rotterdam, Feijenoord, IJsselmonde and Charlois



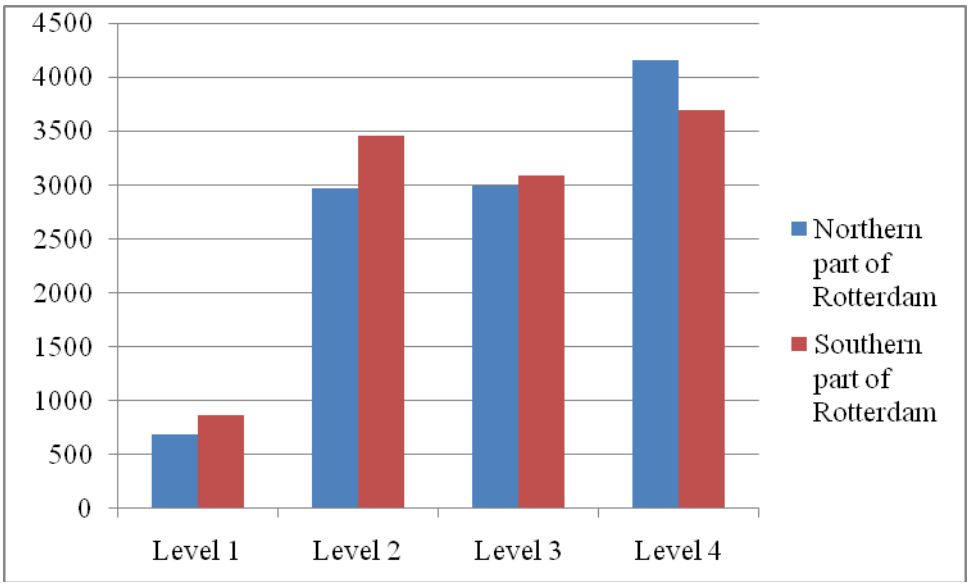




Source: data from COS, 2010, revised by author.

The people in the boroughs of IJsselmonde, Feijenoord and Charlois have a lower education level than Rotterdam's average (OBR, 2007, p. 5 and Municipality of Rotterdam, 2009). Figure 18 shows the difference in vocational educational level (MBO) between the northern part of Rotterdam and the southern part of Rotterdam. In the northern part of Rotterdam a larger group of students follows MBO level 4 education.[4] The southern part of Rotterdam has a higher percentage of people studying MBO level 1, 2 and 3. Most people follow MBO 4 education. The strength of the Rotterdam- South area therefore lies in vocational education.

Figure 18: Amount of people living in Rotterdam in MBO- educational level in 2009-2010



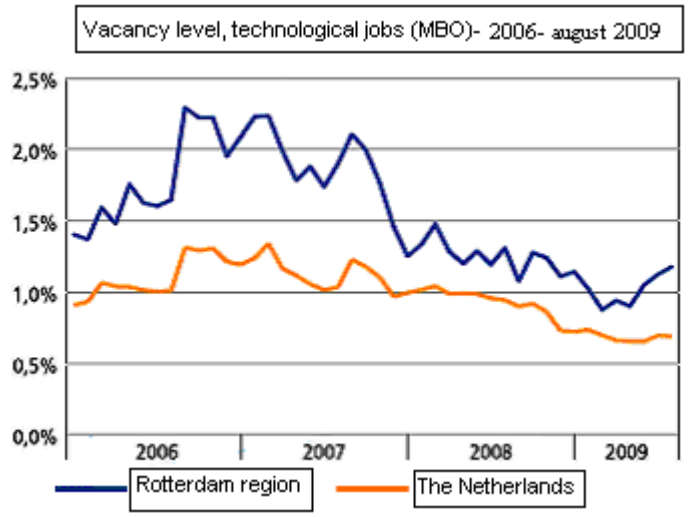
Source: data from COLO/ OCW, revised by author.

[4] MBO level 4 is the highest MBO education level and gives the possibility continue to study at HBO –level education.

5.2 Demand for midtech labor

The employers interviewed indicated that the demand for midtech labor increases in the near future, due to the retirement of the current employees (see paragraph 4.5). An increase in demand for midtech labor can be seen through an increase in vacancies in the future. The Rotterdam region always had a higher vacancy level for MBO- technological jobs (of which the midtech vacancies are a large part), as Figure 19 indicates.

Figure 19: Vacancy rate for MBO technological jobs



Source: Platform betatechniek, 2009, p. 48, adapted by author.

Moreover, the amount of vacancies for all (not only MBO as Figure 19 illustrates) technological jobs is higher in the Rotterdam region than average in the Netherlands. For other occupations (non- technical occupations) the amount of vacancies in Rotterdam is below the Dutch average (Platform betatechniek, 2009). The demand for technical educated people is thus high in this region, especially at the MBO level. This can be explained by the fact that most midtech firms are located in the Rotterdam region.

Recently UWV werkbedrijf (2010) saw the highest vacancy level in industry and technological occupations compared to other sectors in Rotterdam. At the same time this industry was characterized by a low amount of people able to fill these vacancies, leading to a scarce labor market for technical occupations. The scarcity is especially large in the dredging industry. This means a huge amount of vacancies and not many people to fill these vacancies. This is in accordance with the information from the interviews in chapter four.

It has to be noted that due to the crisis the market for technical employees has become less scarce. Many of our interviewees indicated that when the market improves the scarcity for technical employees will be very high again.

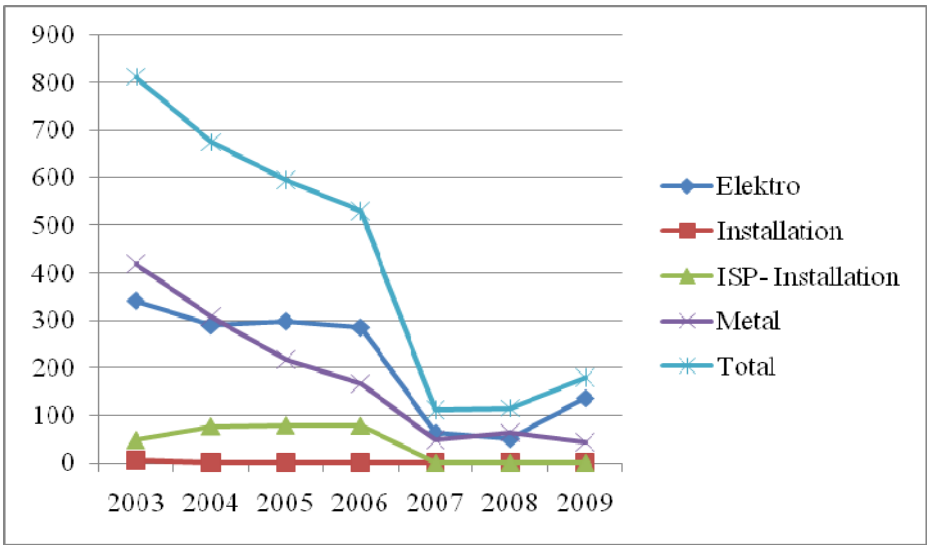
5.3 Supply of midtech labor

The employers fill their vacancies in many different ways. Most prominent are students that just finished technological education, people that re-educate themselves from other occupations and hiring of workers from Eastern Europe.

New employees from vocational schools

Before youngsters enter MBO education many first need to finish their VMBO education. The amount of students in VMBO technical educational programs is dramatically declining in Rotterdam. Figure 20 shows the decline in VMBO education for the specializations, metal, elektro and installation.[5] This figure only shows the inflow of students, the amount of students that eventually receives a diploma is lower because some students will never finish their educational program. The decline in students is especially problematic when thinking that this where most MBO schools get their students from. It has to be noted that since 2007 the amount of students is not declining anymore. However, still not enough students are in VMBO technical education to have a constant flow of students that can move up to MBO education according to the information from the interviewees.

Figure 20: Inflow of students in VMBO education in Rotterdam



Source: data from Kenteq, adapted by author.

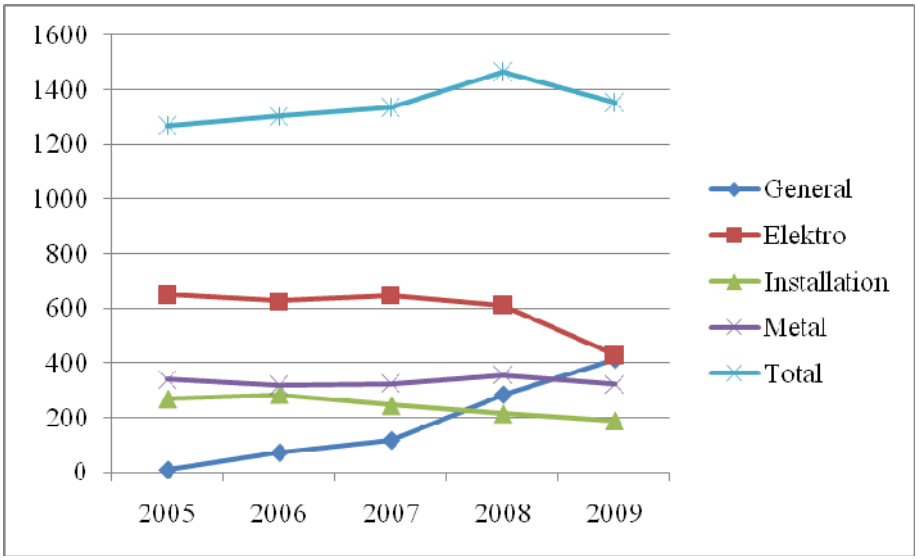
The current large MBO schools in Rotterdam are Albeda, Zadkine and the Scheepvaart en Transport College (STC). The STC specializes in the shipping industry and prepares students

[5] Figure 19 represents the four specialized VMBO programs. Some broader studies are not incorporated in these figures, because firms less likely to hire these students. They prefer students with the educational attainment of a specialized program as is concluded from the interviews with the midtech firms.

for a job at sea. In MBO education the total amount of technical students increased from 2005 until 2008 (see Figure 21). In 2008, the amount of students dropped again. Like Figure 20, Figure 21 only shows the inflow of students, the amount of students that eventually receives a diploma is lower because not all students finish their educational program. The general technical educational program sees an increase in amount of students, while the specialized programs often decline. The general technical program is too broad for most employers to hire students from. Employers wish to hire people that followed a specialized program, otherwise they have to re-educate students entirely when coming to work at the firm.

It has to be noted that these figures do not show the amount of students in the educational programs in mechanical engineering, wood and furniture education and construction of modes of transportation. It is known however from interviews (labor supply and employers) that the amount of students in these education programs is also low.

Figure 21: Inflow of students in MBO technical education in Rotterdam



Source: data from Kenteq, adapted by author.

According to the information received from the interviews, several reasons can be mentioned that have caused for this dramatic decline in students on the technical schools, especially in VMBO education. Rotterdam is a very cultural diverse city in which not every inhabitant is familiar with the opportunities of technological education. Secondly, technological education is more expensive than some other educational programs. Technical educations need materials and machines which need to be bought in order to give good education. With half empty classes, the classes were combined in order to reduce the costs from the technical programs. The schools are not given any incentives to get more students in technical programs, even though the demand for students is much higher in these programs

than in some other programs. Because it is not interesting for a school to offer specialized technical programs because it will not attract a large group of students the schools are less interested in giving extra attention to these programs. The third reason for the dramatic decline is that with half empty classes, classes were combined and therefore the specialization left. This also caused for a flight to schools in the vicinity of Rotterdam that did offer more specialized technological education. A combination of these and other aspects, has helped the classes in Rotterdam to get almost empty.

Re-education

People that want another job and re-educate themselves are a popular group to hire from for many firms. These people are often motivated and already know what working means. Some interviewees indicated this is a more secure group to hire from than students of 18 years old just coming out of school. The students just finished school might change character several times and eventually do not want to work in technical occupations at all. The investment in time and money is large and might lead to an eventual negative result. Therefore re-educating people with another educational background is another way to get new personnel for some firms. Most companies acknowledge that they wish to hire relatively young people, because these are the people that really grow in their job and can become high quality craftsman.

Hiring from abroad

If there are not enough people or people that are motivated in the Netherlands, more craftsmen will be hired from abroad. Many Eastern European people are hired that now live in the Rotterdam- South area. The interviewees indicate that they wish to hire Dutch people. However two problems in the Netherlands cause them to search for personnel elsewhere. First, there are not enough people that apply for technical occupations. Secondly, many of the people that apply are not motivated at all to go to work. Therefore the companies look for motivated personnel elsewhere. People from Eastern Europe often do have this mentality. Companies acknowledge the risk of the dependence on these people. If the economy grows in Eastern Europe and more jobs become available in the home country of these people many will not come back to the Netherlands.

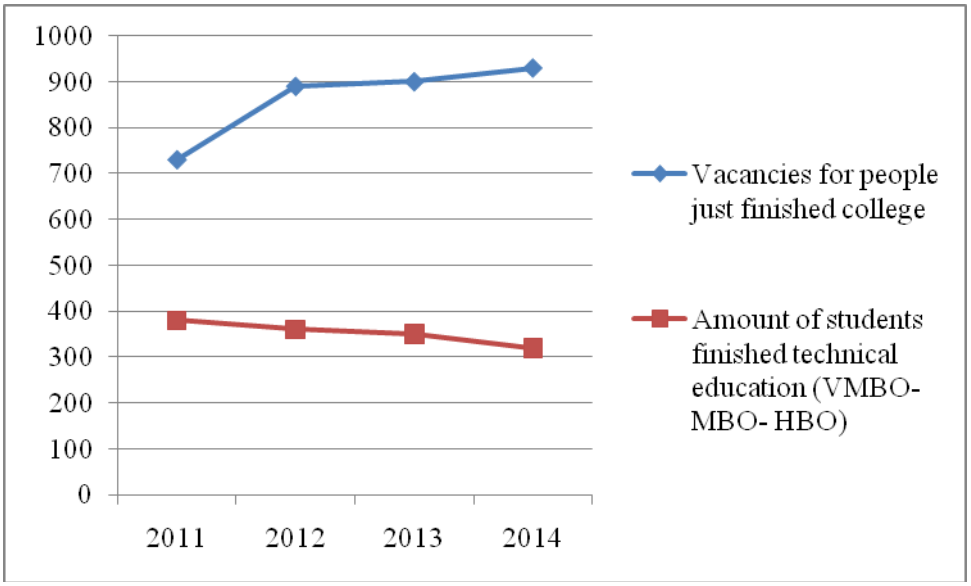
The interviewees also indicate it is problematic to hire abroad, because the Dutch quality level is now being passed on to the Eastern Europeans. The risk is that the quality of the Eastern Europeans increases considerable. At the same time the Dutch quality declines because the knowledge cannot be properly passed on to youngsters because they are not present.

5.4 Indication of the current mismatch

The current mismatch in the midtech sector is easily mentioned following paragraph 5.2 and 5.3. The demand for midtech labor is bigger than the supply of labor in this sector. In Rotterdam the amount of jobs available for youngsters is high due to the high rate of retirement. Currently, not enough students finish college in order to fulfil this amount of vacancies. The amount of people entering the midtech sector from other branches and sectors is also too low to fill the demand for this type of labor.

Figure 22 gives an indication about the current mismatch in the technical installation branche.[6] The figure shows the expected amount of vacancies for students just from school in Zuid- Holland. The total amount of expected vacancies is based on a group of people that move up to better paid jobs, a group of people that enters the midtech sector from other jobs and an amount that just comes from college. As figure 22 shows, the amount of vacancies for people that just finished college (VMBO- MBO- and HBO) increases the coming years. The figure also shows the predicted amount of students finishing technical education. In 2014, 350 people that just finished MBO will be needed in the province of Zuid- Holland. It is expected that only 210 students finish MBO college that year in Zuid- Holland (OTIB, 2010). A large mismatch is thus expected in the installation branche.

Figure 22: Mismatch between vacancies and people that just finished college in installation branche



Source: OTIB, 2010, p. 37, adapted by author.

[6] The figure does not show the precise figures about our geographic area and the midtech craft. However it does give an indication about the current mismatch in the installation branche.

In the metalindustry the same indication can be given about the current mismatch. In the Rijnmond region around 1755 people will retire in the “kleinmetaal” (fine metal industry) in 2013 (OOM, 2008). In 2009, the inflow of students in an educational program specialized in the metal industry was 888 students in the Rijnmond region (Kenteq, 2010). The eventual amount of students that will finish their educational program will be lower than 888 students. The amount of people retiring in the metal industry will however be higher in the Rijnmond region than 1755 people. This because not only the “kleinmetaal” but also the “grootmetaal” will see a large amount of people retire these years. Again, the demand for labor is much bigger than the supply of labor coming from the educational programs.

Bottlenecks in the current mismatch

From the interviews (with both employers and parties involved in the labor market) several bottlenecks can be indentified that caused this mismatch or increase it even further. Many interviewees indicate that a general image about working at technical jobs lacks. Therefore many youngsters have no idea about working in technical occupations. The sector is not known for making itself visible. Currently, too many programs are developed seperately. A general image about working in technical occupations is not built. Another bottleneck is that due to the declining interest in technical education the classes become smaller. This leads to the bundling of classes with the risk of declining expertize and knowledge. A third bottleneck is the trust between companies and schools. This trust declined because of a decline in organizational power at the schools for technical education. As a result the companies reduced or quit their cooperation with schools and do not offer internship places. When they need new workers, they hire young people without the right educational background and send them to internal educational programs at key firms in the region. If more students go to internal educational programs this leaves out the schools and the working of the schooling system becomes blurred. A fourth bottleneck that increases the mismatch is the motivation and work ethic of current students. Currently, detachment bureaus accompany youngsters through internships and school by teaching them what companies require as having a work ethic and motivation. These bureaus work closely with the students and teach them the soft skills nessecary for a job.

Opportunities for people from Rotterdam- South

The mismatch shows that there are a lot of opportunities for youngsters in Rotterdam- South to fulfil this vancancy level. Especially, since most jobs can be found in the Rotterdam- South area which is nearby. Moreover employers wish to hire young people who can work for them

for a long period of time and they wish to hire Dutch people before hiring abroad (from Eastern Europe). The problem for the inhabitants of Rotterdam- South is that they often do not know about the possibilities in technical occupations, because their friends and family do not traditionally work in these industries.

5.5 Barriers that limit the employability of inhabitants of Rotterdam- South

In the beginning of this research several conditions have been mentioned that might obstruct the inhabitants of Rotterdam- South from getting employed. If these obstructions are removed the employability of the inhabitants to work in the midtech sector possibly increases. Whether these hypotheses are true is tested through interviews with different parties engaged in the labor market in the midtech sector. The interviews with the employers in the midtech sector are also used for this part, to support the interviews from the parties engaged in the labor market.

5.5.1 Education level

All interviewees indicate that a sufficient educational level increases the probability of hiring. Employers want to re-educate possible employees if needed, however a sufficient minimal educational attainment is needed. This sufficient educational level for the midtech sector is MBO 3-4 (sometimes MBO 2 is still sufficient) for electrical and installation craftsmanship. For the metal industry this is more diverse and depends on the type of firm. MBO 2 is the lowest level to be hired from. However many firms are shifting from this educational level towards hiring people with MBO 3-4 education. In the past students with only VMBO educational attainment were also hired. To date these students have not acquired enough skills to work in the midtech sector. Therefore it is very important that students that finished VMBO education are stimulated to continue education attainment on MBO technical schools. Many employers in the different industries in the midtech sector indicate that they wish to hire more people with MBO 3- 4 education and especially mechanical engineers with MBO level 4 in the future. The problem currently is that most people follow MBO 2 education.

The educational level from the current employees that are working at the midtech firms and living in Rotterdam- South is sufficient. The current mismatch is that firms wish to hire more MBO 3-4 while most youngsters in Rotterdam- South follow MBO 2 education. These students would more easily get a job when having attained MBO 3-4 education. Moreover the technical educations see a significant amount of students not finishing their education which is also not good for their hiring probabilities.

H1.2.1: A sufficient educational level is an important condition for getting a job for disadvantaged people.	Accepted

5.5.2 Soft skills

From the interviews it can be concluded that the soft skills are just as or maybe even more important for hiring than the educational attainment. When a potential employee has acquired the sufficient educational level, but lacks motivation and work attitude this person will not be hired. The employers in this sector perceive soft skills as very important because work is done with expensive materials, and the labor costs are already high. It therefore costs a lot of money to keep a person working who is not motivated or does not have a proper work attitude.

The problem of not enough soft skills is a general problem of youth according to many of the employers and parties engaged in the labor market. However in Rotterdam- South the problem is enlarged because the area can be characterized by a clustering of people of lower income brackets and lower educational attainment. These aspects together with higher unemployment levels do not increase the general motivation and work attitude in a neighborhood. Positive role models, as will be illustrated in paragraph 5.5.4, can increase the motivation of youth in these areas. All companies are open to potential personnel from Rotterdam- South.

Many interviewees relate the general problem of motivation and work ethic to the different cultures present in Rotterdam. People that originate from other countries are often familiar with a different work ethic. This differs considerably from the traditional Dutch work ethic. Many companies in Rotterdam (and region) therefore claim to be less strict than in the past. Still most potential employees do not have enough motivation or work ethic to be hired.

H1.2.2: A sufficient amount of soft skills is an important condition for getting a job for disadvantaged people.	Accepted

5.5.3 Mobility

The interviewees indicate that the midtech personnel have a limited reach in terms of job search. They want a job near the place they live. Currently people living in Rotterdam – South work at firms in Rotterdam, Barendrecht and sometimes Ridderkerk. Companies further away (Papendrecht- Dordrecht) seldom or never receive an application from Rotterdam (South). This is the same for companies in Krimpen aan den IJssel. These firms have more people employed living in Krimpen/ Capelle aan den IJssel and the cities surrounding that area than applications and people from Rotterdam.

Employers require that an employee is at work on time. Therefore adequate mobility structures are important to make it easier for employees to be on time. More frequent bus

services at the opening hours of industrial firms and stopping closer at the large firms can increase the probability of working at these firms.

People living in Rotterdam- South without a car are for example limited in their possibilities to work in the midtech sector in Rozenburg. People just coming from school often lack a personal car. Companies in this area of the harbor have a lot of problems hiring young people because their company is out of the visual area of the youngsters and difficult to get to. Better mobility arrangements can increase the possibilities for the people of a disadvantaged area of working a little further out of their direct search area. In the direct search area of the inhabitants of Rotterdam- South most jobs in the midtech sector in Rotterdam- South can be found in Waalhaven (Table 3) next to the PoZ area. Europoort, another large borough for midtech jobs, is more difficult to reach and the mobility level has to increase to increase the probability of employment for the inhabitants of Rotterdam – South.

H1.2.3: A better mobility level is an important condition for getting a job for disadvantaged people.	Accepted

5.5.4 Positive role models

All interviewed labor parties (and many employers in the region) believe that the information about the possibilities of working in technical occupations must increase. When more people in a neighborhood start working in the technical occupations these people can be positive role models from the own neighborhood. These people are expected to be very important in the poorer neighborhoods in Rotterdam.

H1.2.4: The usage of positive role models is an important condition for getting a job for disadvantaged people.	Accepted

5.5.5 Informal networks

Informal networks are very important for people in these industries. Some of the companies indicate that they never had problems finding new personnel in the past due to the presence of many informal networks. Always people came to their firms and asked for a job. Networks of family and friends arranged these jobs because many people worked in the industry and knew what was happening at several firms. Nowadays less family members go and work in the industry. The structure of informal networks has declined a lot in the industries that form the midtech sector. For some of the SME’s this means a whole new world of finding your own personnel and new possible personnel is not automatically coming to the firm.

In Rotterdam- South it is even more problematic because less people are in a position to form the informal network, due to the fact that they do not work at all. That informal networks can work is illustrated by a firm in located in the southern part of Rotterdam. This firm needed new young personnel. They could not find it from the schools and therefore re-educated someone that applied with a lot of motivation and work ethic. The new employee heard the firm needed more young personnel and new some acquaintances that also needed work. This network continued to build and eventually seven people were able to find a job through these informal networks. The informal networks are thus very important for knowing about the possibilities in the midtech sector. And with more informal networks people are more easily able to find a job, because they know more about vacancies and possibilities in the midtech sector.

H1.2.5: More usage of informal networks is an important condition for getting a job for disadvantaged people.	Accepted

5.5.6 Substance abuse and crime

From the interviews it can be concluded that reduction of substance abuse and reduction of crime- sheets increases the possibilities of getting a job in general. However, the companies interviewed feld they did not have the knowledge to answer whether substance abuse and crime is currently a problem with employees coming from Rotterdam- South. The parties engaged in the labor market confirmed that it might be a problem more severe in the Rotterdam- South area but they also did not have the knowledge to confirm this. Some of the employers noted they had sometimes problems with personnel addicted to drugs, but it is not possible to generalize these individual cases to be illustrative for the entire Pact op Zuid area. Because the interviewees cannot give information about these issues it is not possible to either accept or reject the hypotheses in the case of the midtech sector in Rotterdam- South.

H1.2.6: Reduction of substance abuse is an important condition for getting a job for disadvantaged people.	Neither rejected or accepted
H1.2.7: Reduction of crime-sheets is an important condition for getting a job for disadvantaged people.	Neither rejected or accepted

5.6 Conclusion

This chapter showed that the midtech sector fits with the vocational education attained by many youngsters in Rotterdam- South. The opportunities for the youngsters in this field are large because the demand for technical educated youngsters is much bigger than the current supply. As a consequence of the current mismatch many firms try to find people that come from other branches originally and re-educate these people. They also increasingly hire Eastern Europeans in order to fulfill the vacancies. The companies however wish to hire Dutch people and especially youngsters, because the elder not yet retired still can teach the youngsters their craft. By passing on their knowledge the high quality level of the Dutch craft can be maintained. Moreover, for many midtech companies a nearby potential labor market is preferable over workers coming from further away or even Eastern Europe. Therefore a lot of opportunities are present in the midtech sector for these inhabitants.

The chapter also confirmed that some conditions have to be satisfied in order to increase the employability of the inhabitants of Rotterdam- South. The research showed that educational attainment and soft skills form a strong barrier for employability of the inhabitants of Rotterdam- South. This limits their possibilities to reap the opportunities of the midtech sector. Better mobility levels, informal networks and positive role models can further increase the employability of the inhabitants of the area. The interviewees did not have the knowledge about drug abuse and crime problems of the inhabitants in Rotterdam- South. Therefore we cannot accept or reject these hypotheses. The hypothesis that some conditions have to be satisfied to increase the employability of the inhabitants from Rotterdam- South can still be accepted.

H1.2: Some conditions need to be satisfied that result in higher employability of the inhabitants of Rotterdam- South before they can take advantage of the opportunities of a growth sector	Accepted

6 Conclusion and policy recommendations

Paragraph 6.1 gives the conclusion of this thesis. Paragraph 6.2 shows the different policy recommendations that follow out of the conclusion. The limitations of the research are discussed in paragraph 6.3. Finally, paragraph 6.4 discusses some recommendations for future research.

6.1 Conclusion

The aim of this research was to see whether the midtech sector shows economic potential for Rotterdam and its region and whether the inhabitants of Rotterdam- South are able to make use of this potential in the future. The conclusion is that the midtech sector shows economic potential for the Rotterdam region and for the inhabitants of Rotterdam- South. The inhabitants from that area can make use of this potential in the future when some barriers that obstruct their employability are removed.

The literature review showed a different way of targeting. By targeting industries in combination with targeting occupations you can target more precise in a region (Currid and Stolarick 2010, Markusen 2004). You are able to look at the industries important for the region and look at which occupations are most important for that region in those industries. This thesis confirms that the occupational- industrial approach identified by Currid and Stolarick (2010) is a more precise and place specific analysis that allows for specific policy. Without looking at the specific strength of the occupations in the region, the industries in the midtech sector would be seen as declining and without potential. This research also confirms the view of Markusen (2004) that the occupational- industrial approach shows the quality of workers which is often a key reason to locate in a specific area.

This thesis illustrated the usage of the occupational- industrial approach in a distressed area by looking at the midtech sector for the inhabitants living in Rotterdam- South. The midtech craftsmanship, the most important skill level in the midtech industries in the region, can be found in the metal industry, machinery industry, construction of modes of transportation, dredging industry and the construction of furniture. This fits with the strength of MBO education from the inhabitants in Rotterdam- South.

The midtech sector has economic potential for Rotterdam- South and the Rotterdam region for several reasons. First, a large cluster operating in the regional and international market is present which operates on a very high quality level. Secondly, the midtech sector has a lot of potential for innovation because many firms entered a niche market in which this should be

possible. Third, the midtech sector is able to strengthen the petrochemical cluster which is important for the additional value of the port of Rotterdam. These three aspects increase and form the competitiveness of the sector. Because of this competitive position the midtech sector will not be easily outsourced which is a fourth reason that illustrates the economic potential of the midtech sector.

The midtech sector is however threatened by a mismatch between demand for and supply of labor. This mismatch is caused by a structural problem in personnel. Not enough students are currently in the schooling programs to fill the vacancies left by the people that retire in the near future, as seen in chapter five. The people that retire have a lot of knowledge acquired through the years and they are the strength of the midtech sector. Many companies are located in the Rotterdam region because of the presence of a large high quality craftsmanship population. Without the craftsmen the strong quality and asset of the region is gone and companies are likely to go elsewhere. It is important that the elder workforce can pass on their knowledge to the younger workers before they have already retired. A better match between demand and supply for midtech labor is therefore needed.

Chapter five showed that the midtech sector fits with the skills potential of the inhabitants of Rotterdam- South. Moreover most jobs (and possibly vacancies in the future) in the midtech sector in Rotterdam can be found in the Rotterdam- South area near the PoZ area. From the interviews it is concluded that the regional labor market is of importance for the midtech firms, providing lots of possibilities for the inhabitants of Rotterdam- South. However some conditions have to be satisfied before the inhabitants from the PoZ area can use the opportunities of the midtech sector. The inhabitants living in the PoZ area can use these opportunities of the midtech sector only when their educational level increases and their soft skills (motivation and work attitude) increase. Better mobility levels can increase the job reach of many of the youngsters of Rotterdam- South towards the midtech firms in the Rozenburg area. Positive role models and informal networks can further increase the amount of people working in the midtech sector from Rotterdam- South. Substance abuse and crime showed to be inconclusive in this thesis as obstructing the inhabitants of Rotterdam- South of using the possibilities of the midtech sector.

6.2 Policy recommendations

Several policy recommendations are derived from these conclusions. Since the research focused on the economic potential of the midtech sector for the Rotterdam region and also focused on whether the inhabitants of Rotterdam- South are able to make use of this potential

policy recommendations will be made in both areas of the research. The recommendations focus on using the economic possibilities the midtech sector offers and removing the biggest threat to the midtech sector.

Policy recommendations to increase the economic potential of the midtech sector

1 *Increase the awareness and create a positive image about working in technical occupations in general*

Creation of awareness about the possibilities in the occupations in the midtech sector is critical. The central message in these programs should be that working in technical occupations is not necessarily dirty and that the sector is not a declining one. The municipality can initiate or support programs that have this goal. Important is that programs are bundled and not initiated separately.

Creating awareness about the possibilities in technical occupations should start at elementary schools. Besides the children, the parents should also be informed about the possibilities of working in technical occupations. Some cultures living in Rotterdam are less likely to work in the midtech sector, because they do not know about the possibilities in the sector and what type of work the occupations require. Many firms are willing to take a leading role in showing parents the possibilities in technical occupations. The municipality can give support to these firms and initiatives.

2 *Try to increase the amount of students going to technical educations*

The interest to provide technical education is declining at many VMBO schools. This declining interest can be partly explained by the fact that the amount of students in these technical educational programs is very small. An incentive can be very important for schools to make their educational program interesting again, not only for their students but also for the schools themselves. An example of an incentive is to reward schools that get a certain amount of students in their specialized technical educational program. A special incentive can also be given to schools that have a high amount of students finishing MBO 3- 4 education. Currently, it does not matter for a school which educational program a student attained and whether this student enters an overstressed labor market.

Another way of increasing the amount of students in technical education is by combining several small educational programs of the separate schools. The municipality can support the VMBO- T manifest, which aims at one large VMBO-T school in the northern part of Rotterdam and one school in the southern part. The aim

of the manifest is to increase the quality of the technical VMBO education and increasing the amount of students following technical education.

In order to secure some financial support the municipality can take their plans to the ministry of economic affairs and apply for funds through the program “Pieken in de delta”. The harbor industrial cluster is a top priority point of the “Pieken in de Delta” program.

3 *Secure a good location environment for the firms in the midtech sector*

The reason for companies to locate in Rotterdam is mostly due to the image of a good harbor industrial cluster. The municipality can retain this image by offering production plants that the midtech sector requires. For example production plants near the water or larger construction sites.

Policy should not force all industrial activities to be moved almost completely out of the city borders but instead they should be located in a fair distance from the living space. People in craftsmanship search a job close to their home and if the companies are too far away these people will search for another job more close to home.

Policy recommendations to increase the possibilities that the inhabitants of Rotterdam-South can make use of this potential

1 *Increase the awareness about working in technical occupations*

Rotterdam- South can be characterized by inhabitants from many different cultures. For many of these inhabitants working in technical occupations is not the type of occupations of which they are familiar with. Therefore a starting program can be to make Rotterdam- South familiar with technical occupations. Such a program might start with making the mothers aware of the possibilities in technical occupations. Parents (and especially mothers) are important in choosing an educational program and therefore they have to be made aware of the different types of education that exist.

Another potential program could be increasing the awareness of the opportunities in the midtech sector for the currently unemployed. Youngsters currently unemployed because they entered an oversupplied labor market, could be re-educated by a company in the midtech sector. Some companies would be willing to pay for the educational program, the student only has to be motivated to work in the midtech sector.

2 *Inform schools, parents and students that it is very beneficial to increase your educational level towards MBO 3-4 education.*

The municipality should aim to increase the amount of students completing MBO 3-4 education (especially in installation and elektrotechnical education). This not only increases the possibilities of the inhabitants themselves but also strengthens the Rotterdam's potential workforce.

3 *Support social projects that aim to use positive role models and the formation of informal networks*

Less advanced youngsters see many distractions surrounding themselves. Positive role models in the neighborhood can increase the possibility that more youngsters will choose technical occupations. Therefore social projects that aim at using positive role models in the neighborhood should be supported by the municipality. Moreover the positive role models often are the ones that can start up informal networks.

4 *Search for ways to increase the mobility levels towards Botlek, Rozenburg, Europoort and Maasvlakte 1 and 2*

The research showed that the young midtech laborers have a low job reach, because they often do not own a car. Their job reach can be enlarged by better mobility levels towards the harbor area. Ways to increase the mobility level can be examined together with De verkeersonderneming Rotterdam, with the Havenbedrijf N.V. or Rijkswaterstaat.

The research also showed that the inhabitants have a low job search area. This can be enlarged by giving the just finished students more information about the possibilities of work in the whole region. A brochure with a list of possible employers in the region already can be a start. Schools and the municipality can cooperate in identifying several firms that might have possibilities for work after graduation. It is important that such information includes many SME's from the region and not only key firms, because the key firms are often the only companies already known by the youngsters.

6.3 Limitations

Data and time constraints have caused several limitations of this research. A first limitation is that not all midtech personnel present throughout all industries are included in this research. The term midtech sector is and has been part of many debates. It is chosen in this thesis to select a specific group of sectors that produce end products for which the midtech craft is most important. The midtech personnel in other sectors or industries is not included. The research excludes for example inhouse maintenance personnel at a company not in the midtech industries defined in this thesis. A second limitation is that different sources are used to identify for example the number of firms and their location pattern. Due to the difference in data source some small differences in geographic scope arose. It has been tried to reduce these differences as much as possible. The small group of firms that is part of this research is a third limitation. The research has a fair overview of the key players in the region, because almost half of the biggest employers (who where later identified as key players) are interviewed. However only 15 SME's are interviewed, which is a relative small amount. The results therefore have to be interpreted with a certain care when generalizing to the entire midtech sector. However it is believed that these interviews do give a fair representation of the midtech sector, because several industry organizations and knowledge centers confirmed our view about the market. A final limitation that has to be mentioned is usage of interviews. A general limitation of using interviews is that people say one thing and act differently. Also the knowledge of the interviewed persons can be a problem. However this has been tried to be reduced as much as possible, because spoken is with either director of the company or the HR manager and also with the directors of the different schools and labor parties.

6.4 Recommendations for further research

This research showed the importance of the industrial targeting combined with occupational targeting approach. The industry looked like a declining one with a loss of employees during the years. When looking at occupations it became visible that the strength of the midtech sector comes from the people for which it is often thought no work is left. The first recommendation therefore is that more industries or sectors should be looked at via the targeting of occupations combined with targeting of industries. More research is necessary in this field that enables us to understand how the occupational- industrial cluster arises and how such a cluster evolves over time. Secondly, the occupational- industrial approach focusing on a distressed area can use more research. This research was only illustrative in the way that distressed areas indeed differ from other areas, but further research is needed to give more

information about this approach in an area in distress. A third and final recommendation is that this research needs to be supplemented with more data about the importance of occupations and in which industries these occupations are present. These data are currently not present at city/ regional level. A questionnaire derived from the interviews used in this research can already give a more thorough data set about which occupations are important in an industry.

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Appendix 1: Interviewed companies

Key player			
Alluminium en Chemie	Mevr. Groen Mevr. Van Gelderen	HSE/Q manager HR manager	Rotterdam
Hertel	Dhr. Schoute	Board director industrial services Western- Europe	
Smit	Dhr. Keser	Director shared resources	
Brush- HMA B.V.	Dhr. de Vries	HR officer	Rotterdam region
Fokker aerostructures	Dhr. Vergouw	Managing director	
Hollandia B.V.	Dhr. Lubbers	Managing director	
HVL	Mevr. Stijnen	Advisor labor market & organization	
Verkerk groep	Dhr. Visser	Managing director	
SME			
De Eendracht B.V.	Dhr. Biezepol	Managing director	Rotterdam
Maatschappij de Maas	Dhr. Penners, Dhr. Kom	Managing director HR manager	
De Wetering Shiprepair	Dhr. Velthuizen	HR manager	
Lengkeek Staalbouw	Dhr. Bikker	Managing director	
Machinefabriek Poot	Mevr. Poot	HR manager	
Machinefabriek van der Klift	Mevr. Leenders	HR manager	
Vermeer Eemhaven B.V.	Dhr. Beringen	Managing director	
Weij Meubelwerk	Dhr. van der Weij	Managing director	
Wolter en Dros	Dhr. Sosef	Managing director	
De Vries & van de Wiel kust en oeverwerken	Dhr. Van Mastwijk	Managing director	Rotterdam region
Fits All	Dhr. van Avort	Managing director	
Krusing Engineering	Dhr. Kuilman	Managing director	
Machinefabriek H. Janssen	Dhr. van Buuren	Managing director	
MAN Diesel	Dhr. Willems Dhr. Leendertse	Managing director HR manager	
Scheepswerf Slob	Mevr. Bakkers	HR manager	
Industry organizations			
Metaalunie	Dhr. Engelenburg	Region secretary district Zuid- Holland	
FME- CWM	Dhr. Van der Mark[7]	Region secretary Rijndelta	

[7] Dhr. Van der Mark is not interviewed. However when contacted, he explained he supports the view of the Metaalunie, with whom he often has meetings to present one view of the metalbranche.

Appendix 2: Interviewed parties representing the labor supply side

Name company	Name interviewee	Function	Type of organization
Albeda College	Dhr. Siemann	Advisor board of directors	School
Albeda College – RDM campus	Dhr. Van Pelt	Projectleader RDM campus	School
Deltalinqs	Dhr. Luijten	Coördinator labor market	Knowledge centre
Deltametaal	Dhr. De Korte	Managing director	Work- learn project
Havenbedrijf N.V.	Mevr. Backx	Corporate strategy advisor	Knowledge centre
HBA	Mevr. Fransman	Head labor market & education	Knowledge centre
Kenteq	Dhr. Peters	Staff employee education and labor market, district South	Knowledge centre
KMR	Dhr. Alderliesten	Technical consultant	Knowledge centre
OBM- Rijnmond BV	Dhr. Kouwenhoven	Director Rijnmond	Work- learn project
Otter- Westelaken	Dhr. Bazzano	Technical consultant	Employment agency
Rotterdams Offensief	Dhr. Boekhoud	Managing director	Knowledge centre
Werk en vakmanschap	Dhr. De Groot	Managing director Schiedam	Work- learning project

Appendix 3: Interview companies

1 Hoeveel werknemers heeft uw bedrijf?

2 Tot welke branche behoort uw bedrijf?

3 Wat is de reden van vestiging in deze regio?

- Infrastructuur- bereikbaarheid
- Geschiedenis
- Ruimte
- Regelgeving
- Aanwezigheid van arbeidsmarkt
- Cluster

4 Werkt u nauw samen met bepaalde bedrijven in deze regio?

5 Bent u een grote toe- en/ of afleverancier in de regio? Buiten regio?

6 Wat is uw behoefte aan arbeid en (midtech) vakmanschap?

- Ontwikkeling van de arbeidsmarkt, nu en toekomst
- Verdeling arbeidsplaatsen (opleidingsniveau en sectorkennis)
- Vergrijzing
- Herkomst arbeidskrachten
- Toeleveranciers (uitzendbureaus, informele netwerken, directe vacatures)
- Welke vaardigheden—vakmanschap
- Welke opleidingen
- Interne opleidingen
- Stages, BOL, BBL
- Sluit het huidige scholingsbeleid goed aan bij vraag naar arbeid

7 Wat is uw huidige relatie met uw omgeving op het gebied van arbeid en kennis?

8 Wat ziet u als sterke en zwakke punten in deze regio m.b.t. arbeid en vakmanschap?

9 Wat is uw visie op de ontwikkeling van de markt, wat zijn de kansen en bedreigingen?

- Nieuwe markten en de investeringsbereidheid hierin
- Kansen m.b.t. duurzaamheidopgave/klimaatverandering
- Arbeidsmarkt

10 Wat betekent dit voor de toekomstige vestigingsvoorwaarden?

11 Wat betekent dit specifiek op het gebied van arbeid en vakmanschap?

- Toename/ afname werknemers
- Verschuiving kennis/vaardigheden
- Outsourcing

12 Heeft u een advies hoe het onderwijs de komende jaren het beste georganiseerd kan worden?

13 Hoe staat u tegenover het aannemen van potentiële werknemers uit Rotterdam- Zuid?

- Ervaring met opleidingsniveau
- Ervaring met werkhouding/ motivatie
- Ervaring met drugs/ alcohol gebruik

Appendix 4: Interview knowledge centres/ schools and other representatives engaged in the labor market[8]

Knowledge centres:

Scholing

1 Kunt u aangeven wat … precies doet?

2 Kunt u wat vertellen over de behoefte aan arbeid en vakmanschap (midtech vakmanschap) in de techniek (elektro, installatie en metaal) nu en in de toekomst in Rotterdam?

3 Zal de vraag naar arbeidskrachten veranderen in de toekomst?

4 Zal de vraag naar vaardigheden veranderen in de toekomst? (opleidingsniveau en sectorkennis)

5 Welke opleidingen zijn belangrijk binnen het midtech vakmanschap?

6 Wat vindt u van de huidige BOL/BBl structuur?

7 Sluit het huidige scholingsbeleid aan bij de vraag naar arbeid?

8 Is het belangrijk dat het werk zich in de nabijheid van deze midtech vakmannen bevind?

9 Wat ziet u als sterke en zwakke punten in deze regio m.b.t. arbeid en vakmanschap?

10 Wordt er (goed) samengewerkt tussen de scholen en bedrijfsleven in Rotterdam?

11 Hoe kan het scholingsaanbod de komende jaren het beste georganiseerd worden?

Markt

1 Wordt er nauw samengewerkt tussen de verschillende bedrijven in de regio?
Op het gebied van arbeid maar ook innovatie

2 Wat is uw visie op de ontwikkeling van de markt, wat zijn de kansen en bedreigingen?

- Nieuwe markten en de investeringsbereidheid hierin
- Kansen m.b.t. duurzaamheidopgave/klimaatverandering
- Arbeidsmarkt

3 Wat betekent dit specifiek op het gebied van arbeid en vakmanschap?

- Totale invulling vervangingsvraag
- Verschuiving kennis/vaardigheden
- Outsourcing

4 Hoe staan bedrijven tegenover het aannemen van jongeren uit Rotterdam- Zuid?

- Opleidingsniveau
- Werkhouding
- Drugs/ alcohol gebruik

[8] The parties interviewed in the labor market are all very different. Therefore two interview lists are used. One for schools and other parties close to the students and one for the knowledge centres which have the overview of the schooling supply and the firms in technical occupations.

Schools and work- learn projects:

Algemeen

1 Kunt u wat vertellen over de school, het opleidingsbedrijf?

2 Merkt u dat het type BOL/BBL trajecten aanslaat, bij de vraag naar arbeid en vaardigheden uit bedrijfsleven?

3 Denkt u dat de vraag naar vaardigheden in de techniek zal veranderen in de komende jaren?

4 Denkt u dat de vraag naar personeel in de techniek in de komende jaren zal veranderen?

5 Waarom denkt u dat bedrijven in de techniek in toenemende mate interne opleidingen aanbieden?

6 Hoe is de samenwerking tussen (scholen en dit soort initiatieven) en het bedrijfsleven m.b.t. de arbeidsmarkt en stageplekken?

7 Hoe kan het scholingsaanbod de komende jaren het beste georganiseerd worden?

Jeugd uit Rotterdam- Zuid

1 Zijn er veel of weinig jongeren uit Rotterdam- Zuid werkzaam in de rijnmond regio in de midtech sector?

2 Wat is het gemiddelde opleidingsniveau van leerlingen uit Rotterdam- Zuid? Is dit hoger/ lager dan uit andere gebieden?

3 Wat is het gemiddelde niveau van werkhouding van de jongeren uit Rotterdam- Zuid? Is dit lager/ hoger dan uit andere gebieden?

4 Wat is het gemiddelde slagingspercentage bij deze leerlingen? Is dit lager/ hoger dan jongeren uit andere gebieden?

Arbeidsmarkt

1 Hebben de jongeren uit Rotterdam- Zuid extra moeite met het vinden van een baan, waarom?

2 Is het van groot belang dat het werk zich in de nabijheid bevind van deze jongeren?

3 Wat zijn de meest voorkomende redenen waarom de jongeren ontslagen worden?

4 Vinden jongeren voornamelijk een baan via informele netwerken, of uitzendbureaus?

5 Zouden meer positieve rolmodellen in de buurt ervoor zorgen dat jongeren eerder geneigd zijn te werken in de techniek?

6 Kunt u aangeven of de volgende aspecten zorgen voor een stijging van de in de inzetbaarheid van de potentiële werknemers uit Rotterdam- Zuid:

Kunt u aangeven of de volgende aspecten zorgen voor een stijging van de inzetbaarheid van de potentiële werknemers uit Rotterdam- Zuid:

	Ja	Misschien	Nee
Adequaat opleidingsniveau			
Motivatie			
Werkhouding			
Taalgebruik			
Goed ontwikkelde informele netwerken			
Positieve rolmodellen			
Daling alcohol/ drugsgebruik			
Daling criminaliteit			
Goede mobiliteits voorzieningen naar het werk			