

Erasmus University Rotterdam

MSc in Maritime Economics and Logistics

2020-2022

Decisive factors determining successful accommodation
of port work by refugees and asylum seekers in the port
of Rotterdam

by

Leonard Jan Faasse

TABLE OF CONTENTS

Contents

- TABLE OF CONTENTS 2
- ACKNOWLEDGEMENTS 5
- ABSTRACT 6
- LIST OF TABLES 7
- LIST OF FIGURES 8
- 1. INTRODUCTION 11
 - 1.1 BACKGROUND AND GENERAL CONTEXT 11
 - 1.2 PROBLEM IDENTIFICATION..... 13
 - 1.3 RESEARCH QUESTION AND OBJECTIVES..... 14
 - 1.4 RESEARCH DESIGN AND STRUCTURE 15
- 2 METHODOLOGY..... 16
- 3 HUMAN CAPITAL IN PORTS 19
 - 3.1 INTRODUCTION TO HUMAN CAPITAL IN PORTS 19
 - 3.2 IMPORTANCE OF HUMAN CAPITAL IN PORTS..... 20
 - 3.2.1 WORKING CONDITIONS..... 20
 - 3.2.2 LOCAL COMMUNITIES, COUNTRIES, COMMUNITY ENGAGEMENT 21
 - 3.2.3 ROLE OF PORT AUTHORITIES AND GOVERNMENT..... 23
 - 3.2.4 AUTOMATION..... 25
 - 3.2.5 SEAFARERS..... 26
 - 3.2.6 RECENT ATTENTION TO TALENT DEVELOPMENT 26
 - 3.2.7 SOCIAL INNOVATION AND POLICIES FOR DISADVANTAGED..... 27
 - 3.2.8 LOCAL NGO INITIATIVES 27
 - 3.3 ENERGY TRANSITION AND THE LABOUR MARKET 28
 - 3.4 PORT LABOUR TRANSITION..... 29
 - 3.5 BENEFITS PROGRESSIVE COMPANY POLICIES 30
 - 3.6 CONCLUSIONS 31
- 4 LABOUR MARKET AND ASYLUM SEEKERS IN THE NETHERLANDS..... 32
 - 4.1 INTRODUCTION 32
 - 4.2 LABOUR MARKET IN PORT OF ROTTERDAM 33
 - 4.2.1 COUNTRIES OF ORIGIN AND CHARACTERISTICS..... 34
 - 4.4 UNDOCUMENTED: EXCLUDED IN THE NETHERLANDS..... 38
 - 4.5 ASYLUM INFLUX: CONTRIBUTION TO PORT COMMUNITY VACANCIES 40
 - 4.6 ASYLUM SEEKER’S LOCATIONS IN THE ROTTERDAM PORT AREA 41

4.7	MIGRATION EFFECTS ON DUTCH LABOUR FORCE SIZE	43
4.8	LABOUR PARTICIPATION IN THE NETHERLANDS	44
4.9	DECISIVE FINANCIAL FACTORS	46
4.9.1	STAFF SHORTAGE COSTS	46
4.9.2	CHEAP LABOUR BENEFITS	47
4.9.3	EDUCATIONAL COSTS FOR NATIVES.....	47
4.9.4	LANGUAGE COSTS FOR IMMIGRANTS.....	47
4.9.5	AVERAGE UNEMPLOYMENT RATES QUALIFIED AND VALUED	47
4.9.6	PRODUCTIVITY LOSS BECAUSE OF LABOUR SHORTAGE.....	49
4.9.7	SOCIETAL COSTS OF IMMIGRATION	50
4.9.8	IMPLICATIONS FOR THE HOUSING MARKET	51
4.10	CONCLUSIONS	51
5	INTERNATIONAL DEVELOPMENTS.....	53
5.1	INTRODUCTION	53
5.1.1	REFUGEES IN THE UK AND GERMANY.....	53
5.2	SUCCESSFUL GLOBAL BUSINESS INITIATIVES	55
5.3	CONCLUSIONS	56
6	RESEARCH FINDINGS	57
6.1	INTRODUCTION	57
6.2	INTERVIEWEES' BACKGROUND	57
6.3	INTERVIEW RESPONSES: EMPLOYERS DO NOT IDENTIFY A BUSINESS CASE HIRING REFUGEES AND ASYLUM SEEKERS.	58
6.4	MAIN MOTIVATION FOR EMPLOYING REFUGEES AND ASYLUM SEEKERS AMONG LARGER EMPLOYERS IS CORPORATE SOCIAL RESPONSIBILITY	59
6.5	WILLINGNESS OF EMPLOYERS TO SUPPORT REFUGEES AND ASYLUM SEEKERS THROUGH INTERNSHIPS AND TRAINING	60
6.6	HIRING REFUGEES AND ASYLUM SEEKERS IN SKILLED OCCUPATIONS IS LIMITED	61
6.7	EMPLOYERS ARE UNCERTAIN ABOUT RULES GOVERNING RIGHTS TO LABOUR MARKET ACCESS FOR REFUGEES AND ASYLUM SEEKERS.....	62
6.8	EMPLOYERS ARE UNCERTAIN ABOUT SKILLS AND QUALIFICATIONS OF REFUGEES AND ASYLUM SEEKERS	63
6.9	EMPLOYERS ARE UNCERTAIN ABOUT LOWER PRODUCTIVITY DUE TO PRACTICAL BARRIERS (E.G. LACK OF HOST-COUNTRY LANGUAGE PROFICIENCY)	65
6.10	PUBLIC OPINION IS SCEPTICAL ABOUT HIRING REFUGEES AND ASYLUM SEEKERS.....	67
7	CONCLUSIONS	69
7.1	KEY FINDINGS	69
7.1.1	DECISIVE FACTORS FOR SUCCESSFUL LABOUR MARKET INTEGRATION OF ASYLUM SEEKERS AND REFUGEES IN THE PORT OF ROTTERDAM.	69

7.1.2 THE IMPORTANCE OF HUMAN CAPITAL IN PORTS AND THE MISMATCH BETWEEN DEMAND AND SUPPLY OF PORT EMPLOYMENT IN THE PORT OF ROTTERDAM	70
7.1.3 THE COMPANIES' ROLE IN PROVIDING RESOURCES, ASSISTANCE AND AID FOR REFUGEE WORKERS.....	71
7.1.4 THE TOTAL ASYLUM INFLUX IN ROTTERDAM, AND THE CONTRIBUTION TO FULFILLING VACANCIES IN THE PORT COMMUNITY	72
7.2 RESEARCH LIMITATIONS AND FOLLOW-UP RESEARCH	72
BIBLIOGRAPHY.....	74
APPENDIX	80

ACKNOWLEDGEMENTS

The journey I began at the age of forty-nine has far exceeded my expectations. My knowledge of economics, shipping, and logistics has expanded considerably.

Data and management sciences proved interesting and accessible despite new and sometimes complicated subject matter. On some occasions, information on port management, maritime law, and sustainability was completely new and very informative.

The course partially took place in the Covid era, with classes postponed, cancelled or transferred to Zoom. My adjustment to this new reality would fail without the professional and flexible MEL team. Excellent support during the 2019 admission by Mariem Ghaoui and Prof. de Groot was followed by exercises in recognising plagiarism and meetings on study regulations and rules of conduct by Renee Slater. Felicia de Jong updated us on countless schedule changes and upcoming deadlines. Martha Tjhin tirelessly followed all classes, supporting students and lecturers and observed speed walking through campus for the entire two years.

The completion of this course culminating in the Thesis project and the desired graduation would have been impossible without my thesis supervisor MSc Maurice Jansen, who guided me and cooperated at each step of my journey.

I will not forget the incredible backing of our group CEO Andreas Drenthen, who supported me from the beginning and did not complain during numerous moments of absence in the offices because of Erasmus classes.

My family and friends with whom the contact moments became spare, and my lovely wife Doreen for not complaining about the dozens of nights I was locked in a study room, working on assignments and performing desktop research.

These were two fascinating years. I'm looking forward to putting into practice the newly acquired theoretical knowledge. A bright prospect is to spend more time with my beloved family in the Netherlands and Germany, the friends I regularly had to abandon, and the many colleagues that took care of business during my absence.

ABSTRACT

Capitalising human capital in ports and the maritime sector is an increasingly urgent issue for companies and port authorities. Rotterdam has been a place of migration since its urban beginnings around 1400, the city has always been a port for transit and transshipping, and immigration was one of the city's defining success factors. Port companies are desperately looking for employees, and increasingly, calls are made to alleviate the stringent policies for attracting and putting migrants to work. Although migration consequences for the Dutch labour market received significant attention from researchers and politicians, the determining factors leading to the successful accommodation of port work by refugees and asylum seekers were not fully elucidated and required additional research.

This thesis focuses on the identification of those factors. From the main immigration streams in the greater Rotterdam area, we ignore family reunification and EU citizens working in other European countries. We elaborate on refugees and asylum seekers and provide comprehensive information on the characteristics of these streams.

We determined the presence of a mismatch between requirements from companies operating in the port of Rotterdam and the human capital supply of refugees and asylum seekers. Educational mismatch in the overall Dutch population is no significant determinant of unemployment as this causes less than 10 per cent of total unemployment (DUR, 1999). The contradiction between low overall and high refugee unemployment rates indicates a more prominent effect in this particular population.

We describe the history of non-EU immigration in the Netherlands and countries of origin and notice that non-western immigrants make up about 38% of Rotterdam's population; we research their participation in the Port of Rotterdam labour market.

The primary interest (dependent variables) are the decisive factors for the successful accommodation of port work. We examine the independent variables such as economic cycles (expansion, peak, contraction, trough), political situation and global peace and stability. We consider variables (origin, language proficiency, skills, age, gender) and mediating variables like public opinion.

LIST OF TABLES

Table 1- Debt-to-GDP ratio 2021.....	21
Table 2 Port of Rotterdam sustainability focus points 2022.....	29
Table 3 Modality split course the Netherlands. Source: Port of Rotterdam.....	30
Table 4 Top asylum application countries of origin March 2022	34
Table 5 ISCED level of education 2022	36
Table 6 Composition Ukrainian refugees in the Netherlands 2022	38
Table 7 - Unemployment first generation, percentage of 15 to 75 year-old labour force. Source : CBS	46
Table 8 Unemployment second generation, percentage of 15 to 75 year-old labour force. Source : CBS.....	46
Table 9 - Dutch annual social assistance benefits 2021	49
Table 10 - Effect of immigration on housing prices	51
Table 11 - Port of Rotterdam survey respondents.....	57
Table 12 - June 2022 first applications in the Netherlands.....	64
Table 13- Companies' willingness.....	71
Table 14 - Potential workforce	72

LIST OF FIGURES

Figure 1 - Political stance Dutch electorate 2019. Source: statista.com.....	12
Figure 2 - Net income development since 1970	32
Figure 3 - Age distribution in the Netherlands.....	33
Figure 4 - ISCED level of education 2022.....	36
Figure 5 - Netherlands Refugee Statistics. Source: macrotrends.net	44
Figure 6 - Granted asylum applications and net migration. Source : World Bank.....	44
Figure 7 - Unemployment definitions CBS 2019	48
Figure 8 - Labour participation and migration background 2022	48
Figure 9 - AFD in Federal elections.....	54
Figure 10 - Survey Question 1 responses	58
Figure 11 - Survey Question 2 responses	59
Figure 12 - Survey Question 3 responses	60
Figure 13 - Survey Question 4 responses	61
Figure 14 - Survey Question 5 responses	62
Figure 15 - Survey Question 6 responses	63
Figure 16 - Survey Question 7 responses	65
Figure 17 - Survey Question 8 responses	66
Figure 18 - Survey Question 9 responses	67
Figure 19 - Survey Question 10 responses	68

LIST OF ABBREVIATIONS

Abbreviation	Full form
AI	artificial intelligence
ALMP	Active Labour Market Policies
API	Application Programming Interface
ARIMA	autoregressive integrated moving average
AZC	Asielzoekers Centrum
BIC	Business Information Centre
C2C	Cradle to Cradle
CBS	Centraal Bureau voor de Statistiek
CEO	chief executive officer
CIA	Central Intelligence Agency
CO ₂	carbon dioxide
COMPAS	University of Oxford Centre of Migration, Policy and Society
COO	chief operating officer
CPI	Consumer Price Index
CSR	Corporate Social Responsibility
CSS	Carbon Capture and Storage
EBITDA	earnings before interest, taxes, depreciation and amortisati
EC	European Commission
EF	Education First
ERDF	European Regional Development Fund
EU	European Union
GDP	Gross domestic product
HR	human resources
HRM	human resource management
ICT	information and communications technology
ILO	International Labour Organization
IMF	International Monetary Fund
IND	Immigratie- en Naturalisatiedienst
IPA	The Instrument for Pre-accession Assistance
ISCED	International Standard Classification of Education
IT	Information Technology
ITF	International Transport Workers Federation
IW	Institute of Germany Economy
MBO	middelbaar beroepsonderwijs
NFIL	non-formal and informal learning
NGO	Non-Governmental Organization

NPO	Stichting Nederlandse Publieke Omroep
OCL	Organisational learning capability
OECD	The Organisation for Economic Co-operation and Development
ONS	Office for National Statistics
Pas	Port Authorities
RDM	Rotterdamse Droogdok Maatschappij
SEOR	Erasmus University Sociaal-Economisc Onderzoek Rotterdam
SYR	The Syrian Arab Republic
TEU	Twenty-foot equivalent unit
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	The office of the United Nations High Commissioner for Refugees
UNICEF	United Nations International Children's Emergency Fund
UWV	Uitvoeringsinstituut Werknemersverzekeringen
WEF	World Economic Forum
WODC	Wetenschappelijk Onderzoek- en Documentatiecentrum
WPCAP	World Ports Climate Action Program

1. INTRODUCTION

1.1 BACKGROUND AND GENERAL CONTEXT

Caused by global conflicts and oppression of dissenters and minorities, asylum-seeker flows will, in all likelihood, continue to arrive at Europe's borders for decades to follow (ESPAS, 2018). However, not all will be recognised as refugees. The Netherlands seeks ways to combine labour market engagement and social acceptance. From an economic perspective, free movement of labour has a similar effect as free movement of goods; the free trade argument from Ricardo and Smit's Wealth of Nations applies: fewer restrictions lead to a situation where comparative advantages of each country are used to the maximum, leading to more specialisation and greater efficiency. From a social perspective, however, immigration causes side effects leading to protectionism (Portes, 2019).

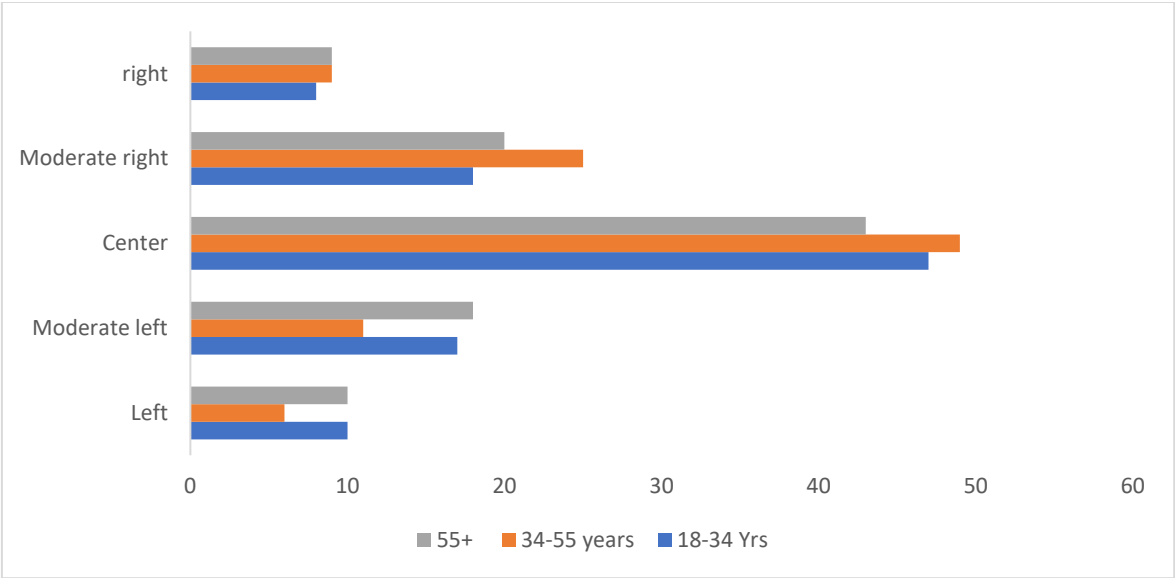
Although numbers fluctuate, Dutch society deals with permanent immigration. A total of 208,000 non-Dutch immigrants entered the country in 2021 based on trustworthy information from the national statistical office (CBS, 2022). forecasts show an annual expected arrival of 290,000 immigrants, five to ten per cent of those people are first-time asylum applicants and following family members (IND, 2022). a look at the numbers from a historical perspective can be found in chapter 4.7; figures from 1960 to 2021 show the total number of refugees granted asylum is 4,313,427 with a median of 24,982 and growing numbers since the 1990s with a 1990-2021 median value of 99,585. Regulations restrict paid employment during the asylum procedure. Five years after receipt of refugee status, the unemployment rate still lacks behind the native population. In a 2020 survey on people granted a residence permit in 2014, 43 per cent held a paid job compared to 70 per cent of the total population (CBS, 2021).

Public opinion on immigration varies and influences politicians' ability to ease immigration restrictions. The opinion on immigration of the general public in the Netherlands is fairly moderate; Dutch people predominantly do not call themselves extreme left or right. The public is influenced primarily by traditional news sources. Public broadcast organisation NPO is trusted by 89 per cent of the people and provides 33 per cent of the news; entertainment giant RTL and newspapers AD and Telegraaf collectively provide some 40 per cent of the information (PEW,

2018). The impact of social media is limited but growing, especially among young people.

When people in the Netherlands were asked about their political stance in a June 2019 survey with 1,028 respondents (position yourself, left or right), Statista roughly shows a graph of a normal distribution, with a large group in the centre, and similar percentages on the left and right wings (Statista, 2019).

Figure 1 - Political stance Dutch electorate 2019. Source: statista.com



Nevertheless, immigration is a recurring theme in national politics and, at the same time, shortage of manpower is a problem for businesses in the country. Ageing and low fertility rates are factors behind labour shortages, and shifting demographics change the balance between the active and inactive population. These changes take place in multiple countries and the impact is compounded by legislation introduced to mitigate society's concerns regarding foreigners' influx (Docquier et al., 2018).

Because demographic development is taking place in almost all developed countries, and resistance to immigration is widespread among the local population, the traditional solution to this problem, namely the movement of labour between locations depending on supply and demand by location in the labour market, is stalling.

The growing shortage creates backlogs in the port and therefore has a negative impact on the productivity of companies in Rotterdam's maritime cluster. Due to its economic significance and contribution to the national GDP, it also affects the Dutch

economy. The results of this study could be of interest to port entrepreneurs, policymakers and NGOs working in the port of Rotterdam.

Labour shortages are not the only reason for the port backlogs; persisting consumer demand followed by post-Covid inflows were reported the critical factor in 2022 in Los Angeles and Long Beach, ports that faced challenges for decades and were never developed to handle significant peaks in arriving cargo (RBC Capital Markets, 2022). The port of Rotterdam has been similarly affected by the impact of lockdowns and the resulting fluctuations in cargo supply, this, in addition to labour market shortages, is a major cause of port congestion.

1.2 PROBLEM IDENTIFICATION

A survey showed that seven out of ten companies in the port of Rotterdam experienced difficulties in fulfilling vacancies (Erasmus SEOR, 2021). Vacancies requiring secondary and primary education were most frequently reported in the sectors Transport&Logistics and Maritime Services, amongst high level technical jobs in the sector Industry. The fall in supply of appropriate workforce caused rising wages and service gaps. Many port companies could not fulfil customer demand, causing supply chain disturbances, loss of competitive advantage and shortage of goods and services in the port. Deltalinqs, the local Port Employers' Association, reported 7.500 vacancies in March 2022, and labour force shortages in most companies operating in seaport Rotterdam. The inadequate available workforce is a persistent problem, enhanced by seasonal labour shortages, when sectors like tourism and farming attract people to join their forces.

An imbalance between quality of supply and demand creates additional pressure on the labour market. The port cluster could benefit from almost a third of Rotterdam's population living in the south of Rotterdam, aged up to 27 years. Rotterdam-South, however, contains more disadvantaged neighbourhoods with people lagging in education and in the labour market. A better market entry for this group needs to be achieved through an integrated plan of action (Jansen, 2021).

A similar gap is visible between asylum seekers and employers. Although considerable numbers arrive in the Rotterdam region, frequently their qualifications

cannot be assessed or are insufficient to meet the required level in the port of the future.

Due to automation in the maritime cluster, the risk of a mismatch between labour supply and demand is already present with natives, it seems plausible that this effect will be more meaningful amongst refugees due to a lack of language skills and lagging education.

Wages form another obstacle in logistics, compared to the ports' petrochemical sector comprising 45 chemical companies, refineries, and power plants. This cluster attracts talent from the same pool of people and immigrants, offering higher salaries and better working conditions enabled by higher profit margins (Esser et Al., 2020).

1.3 RESEARCH QUESTION AND OBJECTIVES

From the problem identification presented in paragraph 1.2, the research question of this thesis identifies crucial factors, enabling policymakers and companies in port to take these into account and shift strategies to improve port work support and capture lessons learned from previous projects and port labour shortages.

The primary research question is: "What are the decisive factors that determine successful accommodation of port work by asylum seekers and refugees?"

To lay down a profound answer to the main research question, the following sub-research questions are investigated:

"What is the importance of human capital in ports? Where does the mismatch between demand and supply of port employment exist, specifically in the port of Rotterdam?"

"What is the role of port authorities in the human capital development of ports in general and more specifically towards the mismatch between demand and supply of port employment?"

"What is the companies' role in providing resources, assistance and aid for refugee workers?"

"What was the total asylum influx in Rotterdam, and to what extent did this contribute to fulfilling vacancies in the port community?"

1.4 RESEARCH DESIGN AND STRUCTURE

This study aims to determine crucial factors that could contribute to the potentially successful adoption of asylum seekers in the port of Rotterdam labour market. We identify the importance of human capital in the harbour and the possible existence of mismatches between labour demand and supply. To reach our objective quantitative and qualitative methods will be applied. A literature review is conducted to determine the importance of human capital in ports. A questionnaire amongst 30 decision-makers in the port community forms the basis of interviews, followed by a statistical approach to the respondent's feedback to categorise the qualitative data. Literature is researched to analyse linguistic patterns.

The research follows the following gradual structure;

Chapter 3: Literature review on the importance of human capital in the port

Chapter 4: Literature review on refugees and the labour market in the Netherlands

Chapter 5: Literature review on refugees and the labour market in neighbouring countries

Chapter 6: Investigate the human capital supply constraints and demand observations

Chapter 7: Quantitative & qualitative analysis of labour market relations

Chapter 7: Quantitative analysis of asylum seekers' labour participation

2 METHODOLOGY

To collect stakeholder feedback, we conducted a ten-question conclusive quantitative research via Google Forms, distributed via email. This survey aims to measure constraints and opportunities for the successful adoption of asylum-seekers and refugees in the port of Rotterdam. To understand the prevailing opinions in the port, we analyse the answers to the multiple-choice questions of the survey. After the first email, seven responses were received; we approached each individual by email one and two weeks later, and the number of responses increased to 34.

We do not apply statistical analysis to the survey research to draw conclusions, as due to the limited number of respondents, the hypothetico-deductive (H-D) method is unsuitable. The study is descriptive-exploratory, aiming to arrive at a factual description of success factors in the deployment of asylum seekers and refugees in the port labour market. We focus on factors that contributed to successful employment participation and where, when and how this contributed. We do not seek to explain the nature of the successful factors.

To define the topic and gain understanding, we conduct descriptive exploratory research by applying a literature review supplemented with descriptive statistics based on the answers to a questionnaire among decision-makers in the port of Rotterdam and on data and statistical information published by a range of organisations. We chose a multiple-choice questionnaire to gauge decision-makers' opinions at the port. Because we did not apply open-ended questions, there is no further explanation of the answers given by respondents. To better understand these answers and to nuance or interpret the relationships between numbers of choices made in the responses, we conducted desk research.

Depending on the research results, derivatives are used to shed light on patterns in the demand and supply observations and constraints. The available information is used to research indicators for the successful adoption of this potential workforce.

An ordinal Likert scale survey with a limited number of respondents has its limitations. If the numbers are reasonably distributed, we can make inferences about

the numbers and their respective meanings themselves, but we cannot guarantee the distance between, for example, 1=" Strongly agree" and 2=" agree". This does not invalidate conclusions about the numbers(Norman, 2010).

Open questions tend to have lengthy, detailed answers, possibly challenging to interpret. Therefore, the decision to limit the choice to five relatively simple options was taken. The researchers' high degree of neutrality because there is no interpretation of given answers is the main reason for applying descriptive statistics. We identify market demand and constraints in accommodation port work in Rotterdam by asylum seekers and refugees.

The guiding principle for our survey is the paper "Hiring refugees-What are the opportunities and challenges for employers", presenting the findings of a 2015 European employer consultation (UNHCR and OECD, 2016).

We identify changes in employers' opinions over time and focus on the port of Rotterdam to determine similarities and differences.

Research questions	Data source	Method
1. "What is the importance of human capital in ports? Where does the mismatch between demand and supply of port employment exist, specifically in the port of Rotterdam?"	Literature	Literature review
2. "What is the role of port authorities in the human capital development of ports in general and more specifically towards the mismatch between demand and supply of port employment?"	Literature	Literature review
3. What was the total asylum influx in Rotterdam, and to what extent did this contribute to the fulfilment of vacancies in the port community?	CBS / IND / UWV	Descriptive statistics from secondary research
4. "What is the companies' role in providing resources, assistance and aid for refugee workers?"	Survey	Descriptive statistics from primary research

A labour market survey by Rotterdam's Erasmus School of Economics shows that 22 per cent of the employed port workforce, amounting to roughly 40,000 people, works in a managerial position (SEOR, 2021). From this group, our research population is

formed by the executives and HR professionals with a decisive influence on asylum seeker and refugee hiring policies.

With a span of control (management ratio) of 1:11 to 1:15 direct reports, we define our target population at 2.660 to 3.636 people(Acharya et al., 2021).

A Likert scale (closed-ended) including five degrees ranging from 1 (strongly agree) to 5 (strongly disagree) is applied for all questions, with no open-ended questions to avoid interpretation errors and subjective judgment of the answers. Considering the study population, although studies contradict each other regarding the optimal length of a scale, research proved that scales of five, seven and ten points scored highest in regarding “ease of use” (Taherdoost, 2020). This was the decisive argument given the limited time we expect our respondents to be willing to invest in the survey.

In a subsequent study, an in-person conversation that goes into the subject in more depth with the interviewees could add value.

The starting points of the survey are the essential findings and possible beneficial measures mentioned in the above survey that we will elaborate on. Survey results are presented in chapter seven.

3 HUMAN CAPITAL IN PORTS

This chapter begins with a literature review on the importance of human capital in ports. We look at issues such as working conditions, and the cultural and financial-economic similarities and differences between ports in different countries. We research the possible effects of automation and digitalisation, the position of seafarers in the global market, recent attention to talent development and how people with a distance to the labour market can be supported in achieving employment.

We describe the characteristics of human capital in ports and the development of the position of port employees over the last decades in both financial and social terms.

3.1 INTRODUCTION TO HUMAN CAPITAL IN PORTS

Due to an ageing European population, low female port labour participation, and changing skill requirements in the maritime cluster, a significant mismatch between demand and supply of port employment was observed in a 2020 case study for the port of Antwerp, a seaport with similar characteristics as the port of Rotterdam (Esser et al., 2020). The worldwide network of port cities (AIVP) in 2015 presented ten goals for sustainable port cities in its AGENDA2030; one of them is investing in human capital for port and social development. Several focal points for the development of port cities are laid down, aiming for people, companies and the society in which they operate to develop in a positive direction for all stakeholders. In this agenda, public-private cooperation, training and education, and inclusion of the complete harbour innovation ecosystem are vital issues (AIVP, 2015). Another important issue for building successful, sustainable businesses is a company-integrated, human-centred approach taking into account technological innovations (Rotmans, 2020).

Attracting talented new employees and continuous attention to the retention and further development of these employees is becoming increasingly decisive for the success of a port (Jansen, 2021). To get the maximum return from these employees, collaboration between training institutes is required as this strengthens the cluster and creates a continuous learning and improvement process.

3.2 IMPORTANCE OF HUMAN CAPITAL IN PORTS

Port cities attract human capital from the urban area surrounding the port and, because of international connections, from far-away regions. Therefore port cities are characterised by a broader ethnic mix compared to other urban centres (Lee, 1998). European port cities already showed high population growth rates in the nineteenth century (Del Panta, 1984). Due to their dependency on immigration to fulfil labour demand, they generally have a more diverse population. In line with Ravenstein's law of migration, most migrants move short distances. However, larger towns attract a greater proportion of long-distance, often overseas migrants (Felloni, 1995).

3.2.1 WORKING CONDITIONS

The demand for flexibility in ports and a changing labour market eroded union coverage in western countries. Reforms and market regulations in seaports were misused to cut wages and intensify workload in ports by confrontational bargaining. Less joint positions weakened the bargaining position of port workers; despite an increased labour force, the number of trade union members in the Netherlands decreased from 1,94 Million people in 1994 to 1,5 Million people in 2021. In that year, 22,8% of all workers in transport and storage (under which the ports resort) were trade union members (CBS, 2021). Occasionally, reforms undermined wages and conditions, and lacking sufficient training caused a deterioration of motivation. In New Zealand, old-fashioned labour conditions in ports were deregulated to increase competitiveness. The Employment Contracts Act 1993 was enforced, unfortunately despite positive, much-needed effects, cost-competition and decreasing margins made the waterfront industry shift to employer control with a less motivated workforce and more casual employment; this undermined sustainability and gains from the new legislation (Reveley, 1997).

Globalisation and pressing customer demands redefined the role of ports around the globe; societies require safety and sustainability, and port worker's unions need to adapt to a new position; a process of privatisation and liberalisation in the port ecosystem will require early involvement of all stakeholders, the customers of the port companies, labour unions, port authorities and maritime employers.

Companies and port workers would be the first to bear the consequences of less productivity, and the loss of cargo flows to other ports, therefore locals unions and

the International Transport Workers’ Federation (ITF) that connects 700 affiliated trade unions support privatisation in ports and productivity improvement, they do, however, require the involvement of local labour unions from the start to ensure a positive outcome for employers, workers and the society they operate in (Juhel, 2001).

3.2.2 LOCAL COMMUNITIES, COUNTRIES, COMMUNITY ENGAGEMENT

The labour markets from Mediterranean European countries Greece, Italy and Spain were considered inflexible and little competitive by EU experts mainly because of a relatively large unregulated informal sector (Lentidou, 2021) and the low part-time employment rate (<30 hours per week) compared to the Northern EU countries (EC, 2009). These labour markets were encouraged and frequently forced to provide a less rigid, flexible regulatory and administrative framework for their labour market (EC, 2010). The effects on these markets were hefty, and for the workers, today’s jobs can be characterised as poorly paid and highly insecure. The regions hosting the most important port cities of these countries (Attica with Athens, Central Macedonia with Thessaloniki, Lazio with Roma, Campania with Naples and Cataluña with the port of Barcelona) are heavily populated agglomerations and, although in different magnitudes, show a “flexibilisation trend” as wished for by the EU.

Deindustrialisation and the loss of thousands of jobs in this sector in ports in Lazio (Roma) and Barcelona (Spain) was followed by rapidly increasing part-time deployment. State-subsidised and service-related jobs, predominant in the capital cities of Athens & Roma, have a dampening effect on the increase in part-time and temporary contracts in the non-capital ports (Gialis, 2014). The generalisation of Northern EU officials characterising Southern EU jobs as precarious, low-paid and informal, although too simply generalised, has some relevance with a more prominent role of the individuals in the family in the well-being of the group because of historical insufficient welfare policies by southern governments(Perrons, 1995).

The 2008 crisis was followed by a decrease in GDP per capita until 2012 of 2,3% for Italy and 17,3% for Greece, while northern countries showed GDP growth.

Table 1- Debt-to-GDP ratio 2021

	Greece	Italy	Portugal	Spain	EU
Debt-to-GDP ratio	193,3%	150,8%	127,4%	118,4%	88,1%

Debt rates in this period increased in all countries. Since then, little progress has been made, with 2021 government debt ratios to GDP in the EU being the highest in Greece, Italy, Portugal, and Spain, well above the EU average (Eurostat, 2022).

Consequently, people emigrate to Northern EU countries from these regions, causing local brain drains and welfare loss (Gialis, 2016).

The port with the highest vessel traffic in Africa, South Africa's seaport Durban experiences problems similar to those in south European ports. On top of that workers groan under xenophobic labour structures introduced in the 19th century with the purpose of exploiting (black) migrants. Still today, wages for port workers are low, and the unemployment rate is high. The OECD and IMF concluded in 2010 that job security for South African workers is at a shallow level, with the fourth least protected workforce offering little protection against unfair employers; only workers in the US, Canada and the United Kingdom are worse off. Migration continues to cause pressure on the impoverished local communities; despite low wages and limited job security, many Africans find themselves better off in Durban compared to their homeland to earn a living with Africa's highest overall GDP and seventh GDP (PPP) per capita of \$ 13,010 compared to the much lower Sub-Saharan Africa GDP of \$ 4,000 (World Bank, 2021). In 1994 the choice was made not to develop policies to combat the existing labour migration system as this would require wage increases, improved employment levels, and formal employment benefits. The possibility for companies to hire cheap and flexible foreign workers keeps the pressure on native workers enabling companies to dictate the market (Amisi et al., 2011).

The liberalisation wave and individual approach from workers in developed countries towards their employers does not follow a smooth line; in the UK, trade union membership declined from 1995 to 2016, followed by four years of increasing membership and a decrease in 2021 (Department for Business, Energy & Industrial Strategy, 2022). A lower level of organization however does not mean dock workers are powerless, on the 21st of August 2022 about 1,900 members of the Unite union in container port Felixstowe went to strike for the first time in 30 years, rejecting a 7% wage increase, emphasizing on UK inflation rising well above that percentage.

The acceptance of the same offer by 500 clerical and engineering employees reveals another possible underlying cause for future unrest in ports; corrected for inflation as

laid down in the Consumer Price Index (CPI) from the Office for National Statistics (ONS), from 1986 to 2011 the lowest-paid 10% of workers saw their wages increase by 47% to an average £ 7,01 an hour, where the highest-paid 1% of workers increase by 117% to £ 61,10 an hour (The Guardian, 2022).

3.2.3 ROLE OF PORT AUTHORITIES AND GOVERNMENT

The Port of Rotterdam Authority develops, manages and operates the port area and plays a role in determining the importance of human capital and observing mismatches. To promote port work a so-called cradle-to-quay educational programme was developed in collaboration with port businesses.

Although one would expect in a semi-private enterprise that some form of social benefit would be more important in its operations than in purely commercial enterprises, this is not the case. Executives of corporatized Port Authorities exaggerate profitability thinking compared to company executives (van der Lugt et al., 2016). Therefore the importance of human capital in port is likely to be noticed earlier in the boardrooms of the private companies in the Port of Rotterdam.

Despite free movement of workers within the European Union, labour market policies differ across countries. The European Employment Strategy consists of non-binding instruments and affects domestic policies, however, social partners often prefer central collective bargaining for their supporters (van Vliet and Koster, 2011).

Refugees have the right to work in the Netherlands and OECD countries. Asylum-seekers however run into restrictions that differ in between countries.

Labour market access varies over time, driven by political power shifts. Paid work is frequently thwarted by a mandatory waiting period of 2 to 12 months (OECD, 2016).

A 2020 Erasmus Centre for Urban Port and Transport Economics research paper marks possible points of improvement. Items mentioned are image (profile the port of Rotterdam as the place to be), infrastructure, matchmaking between companies and students, education, and retraining. There are many well-intentioned initiatives in port where education, the maritime industry and intermediaries find each other.

More coordination, more target-oriented policy, public-privately funded learning environments and talent development through retraining or upskilling are elements that need an introduction. Artificial intelligence is expected to reduce some tasks in

ports; nevertheless, old-fashioned craftsmanship remains indispensable. In an era of accelerating innovation, conceptual thinking and digital, social and problem-solving skills are also becoming increasingly important (Jansen et al., 2020).

A better alignment of staff qualifications and the demands in the port of the future is the main goal of Rotterdam's "Leerwerkakkoord haven" (apprenticeship agreement port). The program includes theoretical and practical education and port job guarantees for 1,000 MBO (college) students from engineering, maintenance and logistic programs, next to 100 apprenticeships. The greatest scarcity is in IT profiles, which we regard as a different sector and out of scope for our research.

We assess the role of port authorities in the human capital development of ports in general and, more specifically, the mismatch between the demand and supply of port employment. Port authorities (PAs) "synchronise the interest and action of public institutions (central government, economic development agencies, municipality) with the behaviour and the strategic intent of private operators and, increasingly, their own strategic intent" (van der Lugt et al., 2013).

The scarcity of human capital in ports assigns a proactive role to the PAs in the local labour market as society increasingly held them "accountable for their performance from an economic, financial and societal perspective" (Verhoeven, 2010). More autonomy and financial self-sustainability offer possibilities for implementing a more entrepreneurial role instead of the traditional land-lord model (Coeck et al., 2013).

The executives of PAs hardly differ from "ordinary" executives in companies in the port area in terms of strategic insights and attention to compliance. However, in port development, long-term planning is dominant, influencing the way executives think about the strategy formation process. Interestingly, executives of privatised PAs pay more attention to profitability than the average executive in the port industry, leading to questioning the privatisation. Ultimately this phenomenon could result in executives giving more attention to shareholders than other stakeholders (Van der Lugt et al., 2017). Attention might be shifted to the profit of projects, neglecting side effects, and other stakeholders experiencing adverse effects. In recent years, the focus has been on technology to increase port productivity without requiring more employees. There is a growing awareness in the port sector that well-educated and motivated employees will also play an essential role in the port of the future. Port

authorities will need to focus on the perhaps initially non-commercial management of human capital (HRM).

On an international scale, the Danube Transnational Programme (DAPhNE), co-funded by European Union funds ERDF & IPA, examined the effects of HR methodologies on a target group. One result is that investments in training programmes take place mainly in large seaports, in small seaports the so-called "buddy system" where colleagues train new employees is common practice. This system is satisfactory on a small scale but not practical when large numbers of immigrants need to be fitted into the labour market. In these large-scale operations, a steering role for the port authority or a government is helpful to achieve a successful result. Interchange between ports and inland ports and learning from best practices would be useful and needs to be supported by PAs (Interreg DAPhNE, 2018).

The United Nations Conference on Trade and Development (Unctad) TrainForTrade programme is developed for port professionals to be better positioned via knowledge exchange and workshops about challenges concerning automation, mechanisation, climate change, energy transition, and cybersecurity (UNCTAD, 2021).

Contribution to societal welfare (e.g. economic development, sustainability, job creation, access to each other's competencies and encouraging knowledge exchange) could be improved by cooperation between port authorities (Wortelboer et al., 2010). Another aspect where the focus on the financial profitability of the management could be obstructive or counterproductive.

3.2.4 AUTOMATION

The digital port, if not already here, is coming at a dizzying pace. Developments that experts see are applications that use blockchain and artificial intelligence. Digital cargo-booking platforms transferring data sets via so-called API interfaces and making them available to customers are increasingly common. Work in ports will change, and a well-functioning port eco-system should take these changes into account.

Maritime academies must offer tailor-made training so that today's youth and professionals (including those entering the country from abroad) can be an inexhaustible source of capital for the port of the future (Jansen, 2019).

3.2.5 SEAFARERS

Acceptable maritime labour standards in shipping are required to balance opposing interests between employers and seafarers. Since 1919 the International Labour Organisation ILO serves all persons working on board a vessel by promoting social justice and minimum conditions for decent work on sea-going vessels.

The ILO draws up Rules and regulations in The Maritime Labour Convention 2006 (MLC); the convention, in force internationally, sets out a broad perspective on seafarers' rights at work (ILO, 2006).

The protection of fundamental principles and rights at work (association and collective bargaining allowance, forced and child labour elimination and discrimination prohibition) is laid down in eight fundamental conventions amongst 41 conventions and recommendations on a wide variety of topics like wage, hours of work and rest, minimum ages, food and catering, safety, social security protection and issues such as pensions and border control documentation (ILO, 2013).

The European Union, with shipping companies controlling nearly 40% of the world fleet and the maritime sector employing around 3 Million people, demonstrates a growing interest in the maritime industry. EC instruments to protect seafarers' rights are mainly directives that need to be transposed into domestic legislation. They cover generic labour-related matters amongst specific seafarer provisions such as training and medical provision requirements on board ships (Christodoulou et al., 2008).

3.2.6 RECENT ATTENTION TO TALENT DEVELOPMENT

Organisational learning capability (OCL) is the organisation's ability to create, develop, and use knowledge to improve performance (Limpibuntern and Johri, 2009). Port companies face challenges in transitioning from traditional industrial work to a port that will be a knowledge-oriented service provider. The staff requirements will include digital skills and innovative strength. Furthermore, people increasingly demand for port companies to become part of the circular economy and contribute to the liveability of society. For this reason, the basis of increasing OCL within organisations lies in the use of intellectual capabilities and the management of talent, which should be key (Afshari, 2021).

3.2.7 SOCIAL INNOVATION AND POLICIES FOR DISADVANTAGED

Contrasting with complaints about manpower shortage, an Erasmus University survey in the port observed 47,000 job seekers registered at the public employment service (UWV) and noticed “The majority of port entrepreneurs are not positive about hiring employees with a distance to the labour market” (Dekker, 2022).

Frequently changing Dutch legislation affects the feasibility of projects designed to improve the entry of unemployed at a distance to the labour market. More and more companies undertake practices to have a positive influence in the world, so-called corporate social responsibility (CSR). The Dutch government supports these practices with subsidies, tax benefits and incentives (Wermelink, 2012). Labour market support policies in ports aim to protect workers and stimulate market access for employees from various backgrounds. These so-called active labour market policies (ALMPs) include training, job creation, subsidies and support for employers, most without short-term effects (Card, 2017). Positive effects are identified three years after implementation; various factors play a role in the effectiveness, such as the state of the economy at the start and the degree of development of the implementing country (ILO, 2018). According to ILO, the most common policy is training support, and employment subsidies are common for vulnerable groups. Extraordinary ALMPs that could be beneficial for people with a distance to the labour market are governmental public works. The latter is often used during a recession; examples are USA’s Hoover Dam employing over 6,000 people during the Great Depression from 1931 to 1936, and the Dutch 935ha Amsterdam forest employment project that employed 20,000 people from 1934 to 1940.

3.2.8 LOCAL NGO INITIATIVES

Dutch NGO Vluchtelingenwerk Nederland in July 2022 offers a roadmap for “labour and refugees” where potential employers can check the options to hire a specific asylum seeker or refugee; red tape shows up when employers are asked for the type and validity of the residence permit, the need for a work permit next to the allowance to stay and the request for a refugee identity card. After completing the list, rules are mentioned that oblige the employer to verify the identity and the right to work. An additional constraint follows the temporary residence permit that is not automatically extended, meaning the employer needs to implement a monitoring system.

Asylum seekers under this roadmap are permitted 24 weeks of annual paid employment. The EU Temporary Protection Directive Ukraine (2001/55 EG) entered into force in 2022 following the mass influx of displaced persons from Ukraine, entitles these refugees to reception, health care, education for minors and the possibility to work; this directive is not mentioned on the website, potentially leading employers astray.

The NGO does not mediate and refers to employer service points, employment agencies, the Governmental Netherlands Employees Insurance Agency (UWV) and surprisingly to Vluchtelingenwerk Nederland, where the employer finds the non-active role in this aspect of caretaking for refugees and asylum-seekers.

3.3 ENERGY TRANSITION AND THE LABOUR MARKET

The global energy transition will impact energy sources and infrastructure throughout the port of Rotterdam, requiring proactive handling both from the Rotterdam port authorities and all businesses in the port and cooperation in the sector.

The skills and expertise requested from port workers will change simultaneously; experience in working with computers and technical knowledge will be more important than before. Education-related factors can facilitate or hinder the options of asylum-seekers filling in the vacancies of the future; schools and tertiary institutions could play a vital role in this process (Sheikh and Anderson,2018).

Declining berth rates, well below the minimum of 2.1, necessary to maintain the population, are expected in most developed countries, according to a study published in the National Library of Medicine (Nargund, 2009). Projections show that because of the growth slowdown, the global population will peak at around 10.4 billion people in 2086, followed by a decline and an average global fertility rate of 1.66 by the year 2100. A consequence of this will likely be more migration as economies will need workers from countries with different welfare levels. Populous countries with emerging markets like China, India, Pakistan and Turkey will occupy both asking and bidding positions in the global labour market. Nigeria, with a rapidly growing population, will become a potential supplier of workers in the future as well (Vollset et al., 2020).

Employees who have to perform essential tasks in the ports will, in all likelihood, be scarce in the future; for that reason, migration seems to be here to stay. Therefore, asylum seekers might offer a part of the scarcity solution with the right approach.

3.4 PORT LABOUR TRANSITION

Intelligent data systems (blockchain, artificial intelligence) and technological innovations (robotisation, automation) change the daily routines in ports. Repetitive tasks executed by relatively low-skilled workers will increasingly be taken over by artificial intelligence-driven systems, robots, drones and autonomous trucks. In addition, well-educated employees will be necessary for control and troubleshooting.

Port digitalisation takes place in four steps, where the impact and coherence between the various IT systems continue to increase. Port digitalisation starts with the phase most ports have left behind (no automation), then passes single automation and integrated systems in which the port community is involved, tentatively arriving at systems involving the hinterland and globally connected ports and supply chains (Jansen, 2019). Simultaneously, accelerating sustainable energy innovations and decarbonising to stop climate change will change the ports forever.

A goal is set for a 55% CO₂ emission reduction in 2030 and neutral CO₂ operation in 2050 by partners in the World Ports Climate Action Program (WPCAP), an alliance of port authorities (Port of Rotterdam, 2022). To achieve these goals, focus areas are identified by the port of Rotterdam, as shown in the table below, each with negative and positive consequences for the labour market and required staff qualifications.

Table 2 Port of Rotterdam sustainability focus points 2022

Focus point	Measures
Efficiency and infrastructure	Heat energy recovery Carbon Capture and Storage (CSS) Bundle Pipelines Rotterdam-Chemelot-Rhineland High-voltage connections for offshore wind farms
A new energy system	Hydrogen conversion, production and import Electrification and onshore wind
A new raw materials and fuels system	Cradle to Cradle (C2C) recycling Biofuel facilities
Making logistics chains more sustainable	Electrification and hydrogen-fuelled conversion inland transport Digitisation, integrated port community system

Port Authorities aim to shift the inland transport modal split to a larger proportion of cargo for rail and waterborne transport, replacing modalities with higher emissions per tonne-kilometre, aviation and road transport (Ritchie, 2020).

The ambition to optimise the mix of transport modalities is laid down in the 2019 “factsheet decarbonising the port and industrial complex Rotterdam”; however, a shift of modalities proves challenging. The ratio barely changes, with minimal shifts that do not always go in the same direction either. It is, therefore, questionable whether significant shifts towards approximately 65% lighter transport in 2030 are realistic; indications for 2022 suggest this will not happen (van der Horst et al., 2019).

Table 3 Modality split course the Netherlands. Source: Port of Rotterdam

	2002	2010	2015 Q1+Q2
Barge	41,1	39,9	41,6
Rail	12,5	12,9	12,2
Truck	46,4	47,2	45,3

3.5 BENEFITS PROGRESSIVE COMPANY POLICIES

A study in Italy and France showed that 77 per cent of millennial consumers are more likely to buy products from pro-refugee brands. The study mirrored findings in the United States, which makes it plausible that Dutch millennials have similar views.

A positive attitude strengthens the company’s workforce because of diversification and creates more customer loyalty. Respondents’ political ideology plays a role; however, consumers who consider themselves right of the political spectrum also confirm their tendency to purchase from companies that help refugees (Erdem et al.,2019).

These arguments are less relevant in the port business-to-business environment. Corporate social responsibility, company image and reputation affect revenues and success (Kyurova, 2017). A tripling percentage (five to fifteen per cent) of Dutch people boycotting certain products since the 1970s reflects the increasing awareness of consumer power. Political consumerism is predominantly practised by the fast-growing, well-educated population in urban areas (Schyns, 2016).

3.6 CONCLUSIONS

To answer our first research question identifying human capital in ports importance and determine if a mismatch between demand and supply of port employment exists in the port, we summarise key messages from the above paragraphs.

There is a mismatch between demand and supply of human capital in the port of Rotterdam and other ports caused by an ageing population and the growing application of new digital technologies. Attracting the right human capital and an approach in which the entire maritime cluster cooperates in training and knowledge exchange will determine the extent to which the port can compete successfully. Because of their traditionally mixed demographics and good transport connections to the rest of the world, it is possible to let immigrants (including asylum seekers and refugees) play a role in filling the vacancies of the future. Due to individualisation among port workers, trade union membership has been declining for decades, entailing a risk that shareholder focus on profit will be to the detriment of employees. Today's society requires sustainable and safe business operations as well as decent employment conditions for the staff; those elements are considered crucial for a successful business. Salaries in southern European ports are considerably lower than in northern ports. The salary gap induces emigration from these countries to the ports of Antwerp, Rotterdam and Hamburg. Given the increased population ageing in these countries, it is in the greater European interest to limit the transfer of human capital within the European Union.

Workers should come from locations with less appropriate work available, from non-EU countries or groups that do not migrate for a better economic perspective but flee their homelands from oppression or violence. The ILO conventions provide an excellent framework of international principles and rights at work. Given the long periods of absence, employment on marine vessels is less suitable for asylum seekers. However, recognised (qualified) refugees can be employed on seagoing vessels. Governments and port authorities need to guarantee stable and transparent regulations regarding the deployment of asylum seekers, refugees and people at a distance from the labour market. Complex rules make companies hesitant and results in urgently needed human capital remaining idly on the sidelines. Finally, we note that Governmental Active labour market policies have proven their worth in the past in activating groups at a disadvantage in the labour market.

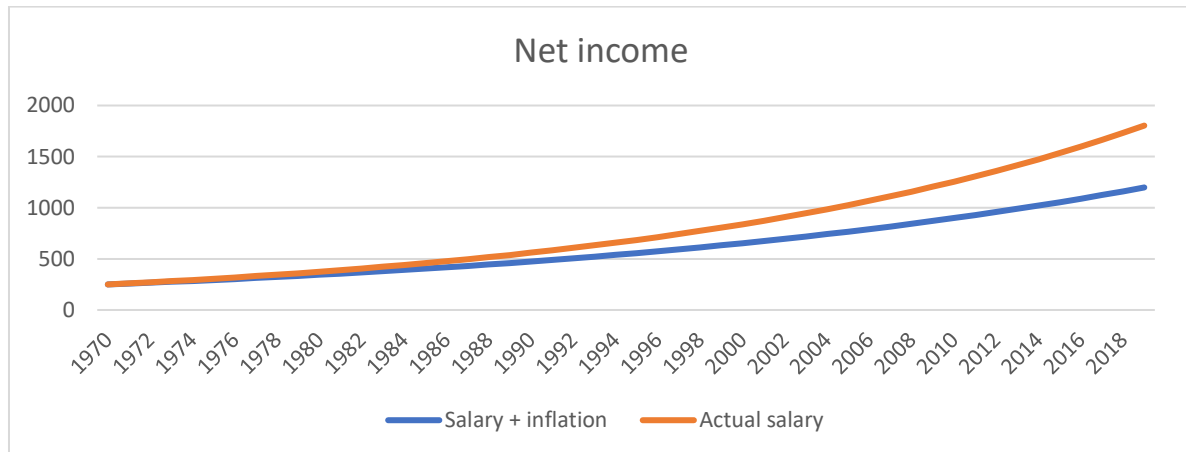
4 LABOUR MARKET AND ASYLUM SEEKERS IN THE NETHERLANDS

4.1 INTRODUCTION

In the next session, we describe the labour market and social circumstances in the Netherlands. The port of Rotterdam, with its demographic characteristics and differences in the available human capital, is discussed, followed by the role of the port authority and the contribution asylum seekers could make in supplementing the desired human capital in the port. We then look at the situation of refugees in neighbouring countries of the Netherlands, England and Germany and discuss successful international projects regarding refugee inclusion in the labour market.

Younger staff value sufficient free time and work-life balance, whereas previous generations of port workers emphasised the financials. Mean nett income in the Netherlands increased by 4,115% per annum from 1970 to 2019 (CBSStatline, 2021). The average inflation of 3,25% over these years brings the average positive balance for workers to € 605,13 a month. Therefore a lack of motivation to work more hours can partially be explained by a lack of financial necessity.

Figure 2 - Net income development since 1970



The average full-time employee worked 2,000 hours per annum in 1970 and 1,700 hours in 2017, caused by the introduction of 38 and 36-hour workweeks and extra holidays. Unemployment in the Netherlands in 2020 was just under four per cent, by most economists considered to be full employment, therefore unemployed people do not directly complement the potential labour pool for the port.

The Netherlands has a share of mostly female part-time workers. The government encourages them to work more by offering subsidised childcare and tax benefits.

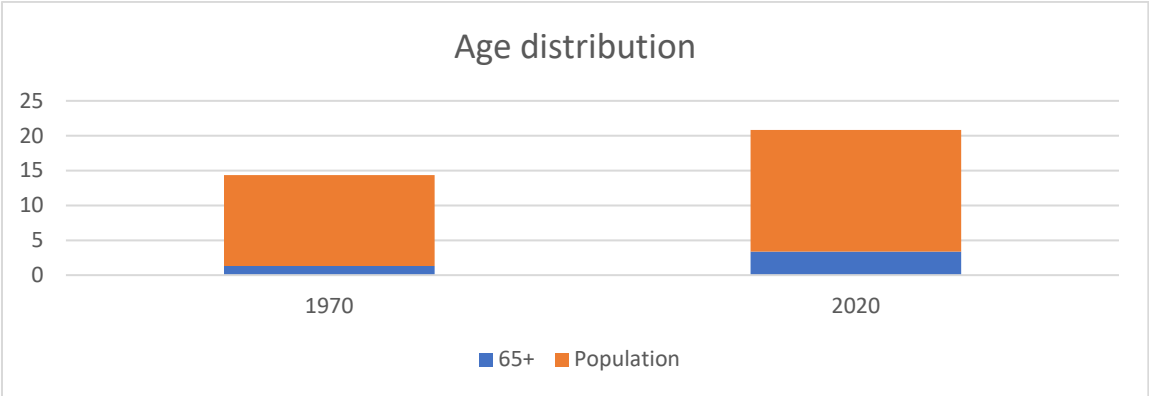
In other countries where part-time work is less usual, however, sometimes women, after becoming a mother, leave the labour market altogether (Adema et al., 2016). Therefore, incentivising this group by changing tax measures, for instance, will have to be done cautiously. It does not seem realistic to expect this group to make a substantial contribution to solving the shortages at the port of Rotterdam

4.2 LABOUR MARKET IN PORT OF ROTTERDAM

Rotterdam’s population is growing and, overall not ageing. Only 50% of the current port workers live in the direct surroundings; the other half travel from far and wide to reach their company; for this reason, the country’s overall ageing population causes pressure on the port labour market.

Since 1972 the 65-plus inhabitants doubled and formed a new group of demanding customers for the shrinking workforce.

Figure 3 - Age distribution in the Netherlands



Many foreign workers in the port of Rotterdam originate from countries such as Poland, Turkey, and Romania. These countries expect reduced working-age populations caused by lower birth rates and migration (Linz and Stula, 2010).

In port logistics, Artificial Intelligence (AI) and automation could take over repetitive tasks in gathering, copying and checking data and transport planning. These techniques will augment worker productivity and form part of a solution for the labour shortage and simultaneously will create challenges in required knowledge.

The benefits of emerging technology (blockchain, digital twin, control towers, ai) are not yet known, causing slow acceptance and application. Market operators agree that this needs to be addressed, various underlying causes can be identified, such as lagging knowledge and limited cooperation in the maritime cluster(Jansen, 2019).

In the port of Rotterdam, companies require knowledge of generic software and some digital dexterity; activities requiring in-depth knowledge like programming, data analytics and network supervision are generally outsourced (Erasmus SEOR, 2017).

One focal point mentioned was increased participation in (mid-level) technical and logistics education, focusing on the non-indigenous population; other points were vocational retraining of inactive residents; and identification of mobility-hindering factors. The backlog in participation of non-western foreigners remained the same in the years before the study. Unemployment disproportionately affected low-skilled workers in the region (Zandvliet and de Rooij-van Leeuwen, 2019). A mobility hindering factor is the difficulty for immigrants to validate their skills and testimonials. There is no international system with agreements on the valuation of competencies. In most cases, non-formal and informal learning (NFIL) is challenging to assess. The solution to this is not yet in sight, In most EU countries, immigrants are not considered dominant, and as a result, there is little policy on validating immigrants' diplomas (Souto-Otero, 2015).

4.2.1 COUNTRIES OF ORIGIN AND CHARACTERISTICS

In March 2022, most asylum applications were submitted by people from Syria, Afghanistan, Yemen, Turkey and Somalia; additionally, a group of people from Ukraine entered the country without having to apply for asylum. To assess the possibilities of deploying asylum seekers, we look to locations, countries of origin, language skills and level of education.

Table 4 Top asylum application countries of origin March 2022

Country of origin (COO)	Syria (SYR)	Afghanistan	Yemen	Turkey	Somalia	Ukraine*
Number March 2022	1,410	538	353	210	177	21,113
Unesco literacy rate percentage	86,4	37,3	70,3	96,7	37,8	100,0
Unesco (UIS) primary education percentage	98,3	65,4	76,5	98,5	33,7	99,8
UNHCR Working-age population(15-64) total(*1,000)	8,582	13,568	11,661	43.520	4,910	25,150
UNHCR Working-age population(15-64) percentage	55,4	56,1	59,0	67,1	50,4	57,6

*Asylum exemption Ukraine: EU Temporary Protection Directive(2001/55/EC), source municipality basic registration persons (BRP).

4.2.1.1 SYRIA

Notwithstanding a civil war In Syria enrolment ratio in tertiary education was 44% in 2019 (Unesco, 2022). Some 2 million were left out of school because schools were damaged or destroyed (UNICEF, 2022). The official language in Syria is Arabic, and some 80% of Syrians with high school education understand English. Low-wage work is available in the current port labour market. Afterwards, better-paid jobs can be found. Basic language skills need to be achieved, experiences and practices require testing by Rotterdam's companies. Lacking international standards makes Syrian diplomas less valuable in the Netherlands.

4.2.1.2 AFGHANISTAN

Decades of violence and poverty caused an estimated 6 million Afghans to be displaced and leave the country. The highest numbers fled to neighbouring countries, Pakistan and Iran. Some 65 per cent of the population are children and young adults (UNHCR, 2022). From this perspective, Afghan refugees in the Netherlands could fulfil a role in the ageing society. The level of education requires attention, the same holds for an illiteracy rate of 62,7% in 2021 (UNESCO, 2021). Language courses and primary education could be useful investments. A German 2017 paper reports that increasing the number of refugees with a vocational qualification by 20 per cent improves the employment rate and wages. Education improves the fiscal balance of migration flows, with lower costs for society compared to following low-investment baseline scenarios (Bach. S. et al., 2017).

4.2.1.3 YEMEN

A 2014 coup by Houthi rebels expanded to a conflict when an Arab coalition began to support the Yemeni government. Seven years of conflict made some 73% of the population dependent on humanitarian aid. Poverty triggered inland displacements, and refugee flows to neighbouring countries (e.g. Djibouti, Somalia). In 2020 3,576 people fled from Yemen and applied for asylum in Germany and the Netherlands (UNHCR, 2021). The age group 15 to 64 represents 59% of the population (World Bank, 2021). The literacy rate varies based on gender and age. At the age of 15-24, males do better with a 90% literacy rate compared to 60% for females (Unesco, 2005). The rate is increasing for the entire population. A large portion of the population finished primary education and secondary education, specifically for males, shows 50%, while females lag with some 40% (Unesco, 2016).

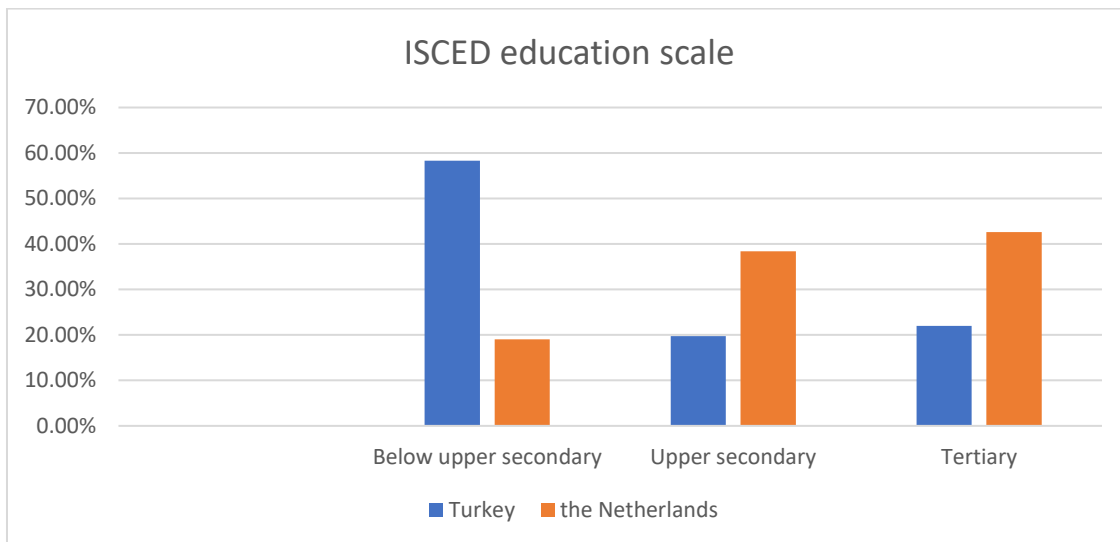
4.2.1.4 TURKEY

We apply the International Standard Classification of Education for a comparison between Turkey and the Netherlands and obtain information on the level of education for 25-64 year-olds (OECD, 2022). The overrepresented low educational level might be beneficial for the port of Rotterdam, considering a small number of natives prepared to become blue-collar workers. Of the Dutch population, 19% scores below upper secondary education, and most continue to study for better-paid jobs.

Table 5 ISCED level of education 2022

	<u>Below upper secondary</u>	<u>Upper secondary</u>	<u>Tertiary</u>
Turkey	58,30%	19,70%	22%
the Netherlands	19%	38,40%	42,60%

Figure 4 - ISCED level of education 2022



Below upper secondary :Until completion 6-8 years primary classroom instruction.

Upper secondary :Education until age of 18, courses prior workforce entry.

Tertiary :Trade schools, higher education degree programs.

4.2.1.5 SOMALIA

Because of a civil war that broke out in the 1990s, political instability and natural disasters, hundreds of thousands of Somalian people fled the country.

Although English is the most popular foreign language, low proficiency is reported by EF, with position 17 out of 21 African countries. According to Unicef, three million children left school. With the longest coastline in mainland Africa and various marine terminals, some maritime and logistic knowledge is likely available amongst the refugees. Somalia's ports are slowly modernizing, although widely available cheap labour diminishes the urgency for improvements.

The International Labour Organization ILO reports that 26 conventions on labour, worker's protection and treatment are ratified and in force. Although Western European standards are higher, workers from the Somalian ports are likely to have experienced some safety standards during their careers.

The generic educational level, language barriers and some 80 per cent active in the agricultural sector means investments in education and training are essential to turn them into a valuable labour source for the port of Rotterdam.

4.2.1.6 UKRAINE

In 2022 a Russian invasion of Ukraine became the largest conventional military attack on a sovereign state in Europe since World War II. The invasion made approximately 16,2 million people leave houses and homes, from whom 9,93 million fled the country (CIA, 2022).

Soon after the invasion, President Zelensky filed a decree prohibiting most men aged 18 to 60 from leaving Ukraine in anticipation that they might be called to defend the country; a rule under discussion as research shows all-volunteer gender-neutral fighting units are more effective (Carpenter, 2022).

As the country claims it fights for its survival, the decree is unlikely to be withdrawn. For the future port of Rotterdam's labour force, we need to look at 16,16% of the pre-war population aged 0-14 years (NL, 16,11%) females and adolescents of 15-18 years from the 9,28% 15-24 group (NL, 11,91%) who are allowed to flee the country.

Ukraine's population pyramid shows a structure that equals the Netherlands; however, due to the extraordinary circumstances, the future labour force for the port of Rotterdam can be subtracted from the people not subject to travel constraints.

In July 2022, about 70,000 Ukrainian refugees were registered in the Netherlands, two-thirds of which were women and girls. Ukrainian people can travel to all EU

countries without the obligation to ask for asylum; presumably, some people are not found in the statistics as some found a place to stay without reporting. These people can work and stay in the EU for one year with the possibility of a three years extension. On the English proficiency index, Ukraine is ranked 30 out of 35 European countries, with marked moderate proficiency from EF(Education First), a privately held global education company in 120 countries. UN Human Development program 2021 reports a mean 10,4 years of schooling. Although many Dutch citizens consider Ukraine refugees European affiliates, a considerable effort will need to be made to ensure these people can add value to the local workforce.

Table 6 Composition Ukrainian refugees in the Netherlands 2022

	Ukraine	Male	Female	Allowed leave	Share	Refugees in NL
0-14	16,2%	3.658.127	3.438.887	7.097.014	22,4%	15.704
15-24	9,3%	2.087.185	1.987.758	2.822.632	8,9%	6.246
25-54	43,7%	9.456.905	9.718.758	9.718.758	30,7%	21.505
55-64	13,9%	2.630.329	3.463.851	4.515.983	14,3%	9.993
65-	17,0%	2.523.600	4.957.539	7.481.139	23,6%	16.554
Total		43.922.939	55.202.319	31.635.526		70.000

The total maximum Ukrainian male and female workforce aged 18-64 in the Netherlands in July 2022 based on a reasonably equivalent distribution within the 15-24 group would count up to 35.869 people, a group to consider as a possible solution for the labour force gaps in the port of Rotterdam. It should be noted that significantly more women than men have fled. Given the unstoppable advance of the digital port and rapid changes in work and employment, the port innovation ecosystem will become increasingly valuable (Jansen, 2022), and employees will have to be sought less in the rough harbour banks of yesteryear. The Ukrainian boys and girls who have sought help could become a valuable source of future professionals who can ensure Rotterdam takes the inevitable step towards digitisation and continues to occupy a leading global position.

4.4 UNDOCUMENTED: EXCLUDED IN THE NETHERLANDS

A group not previously mentioned are aliens residing illegally in the Netherlands. Utrechts University Research Centre estimated the number between 23,000 and 58,000 (WODC, 2018); this is a decline from a 2006 research assessing 74,000 to 184,000 persons.

The expansion of the European Union from 2007 to 2013 and a Dutch so-called *Ranov* residence permit called "general pardon" introduced in 2007 is likely to have caused a downward effect (Kromhout et al., 2008). With 67 Million United Kingdom(UK) inhabitants that left the EU and six applicants awaiting EU membership with 64 Million inhabitants, illegal residence will continue in the future. The accession negotiations with Turkey, with its 84 Million fast-growing population, were frozen in 2019 following accusations of human rights abuses by the Turkish government. Holland is attractive to Turkish workers, mainly because of the difference in gross domestic product per capita, taking into account local price levels, between the Netherlands (Usd. 59.700) and Turkey (Usd. 27.780) in 2020 (The World Bank, 2021). Another aspect is the presence of large groups of people of Turkish background, in addition to freedoms of religion and expression. As applications by Turks for economic asylum generally are rejected, it is expected that a part of the rejected Turkish asylum seekers will disappear into illegality.

Policy in the Netherlands focuses on voluntary departure. Forced deportation is an option for criminals, such as frequently shoplifting aliens and people causing a nuisance resulting in undermining support in society for asylum. Contrary to the principles of the policy, the majority of the people are not leaving, and finally, only 44% of foreign nationals whose residence applications were rejected departed from the Netherlands from 2013 to 2017.

The complexity of this matter is illustrated by the scores of other European countries, which, without exception, score lower figures ranging from 35-40% for France and the United Kingdom to a meagre 4-5% for Denmark, Italy and Spain (Hout, 2018).

Researchers from the Hague University of Applied Sciences in August 2022 were cited in national newspapers speaking about this population, commenting that they could fulfil at least a part of current vacancies in the labour market; they mentioned so-called dreamers, children of illegal migrants sometimes born in the Netherlands, educated at the expense of the Dutch state, understanding the culture, mastering the language and ending up with a diploma they are not allowed to use (Boers, 2022). These minors lose protection and rights to work when they reach eighteen. The Dutch government drafts this harsh policy with the aim of reducing the number of undocumented migrants. Given the tight labour market, a less restrictive German system called "Duldung" (tolerated stay) is an alternative.

A side effect of this system is that the number of persons required to leave Germany but stayed because they were granted Duldung doubled from 2014 to 2017, meaning more persons were required to leave, but the status becomes less meaningful because Duldung status persists for years (Biehler et al., 2021).

A spokesperson for the Dutch ministry of social affairs and employment emphasises that using undocumented migrants in the labour market would undermine the system in the Netherlands. Having Dutch papers provides access to social security, and admission of undocumented migrants to the labour market could become widely known and worsen the problem. For that reason, 8,000 euro fines can be imposed on companies hiring illegal immigrants.

The so-called six pillars agenda clarifies the Dutch government's intentions. The first pillar is "prevent irregular immigration", considering this, it is unlikely that a radical adjustment in the treatment of illegal immigrants in the Netherlands will take place. The tragic cases must pin their hopes on individual tailor-made solutions. Despite a screaming need for personnel, the society and its government do not intend to legalise work by illegal immigrants; it is, therefore, unrealistic to assume this group can make a substantial contribution to solving the problems in the port of Rotterdam.

4.5 ASYLUM INFLUX: CONTRIBUTION TO PORT COMMUNITY VACANCIES

The total number of asylum- and family reunification seekers that arrived in the Netherlands from 2017 to 2021 was 136.785, 39% originating from Syria, where the 2011 evoked Syrian conflict caused an estimated fifty per cent of the pre-war residents to flee their homes (IND, 2022). Working is prohibited for six months following the request; after that, a permission to work up to 24 weeks a year may be granted. A contribution is due for facilities and the first 25 per cent of earnings may be retained until a maximum of € 185--/month. These rules are introduced to limit asylum seekers' access to social benefits and taking native workers' jobs.

Only a limited number of asylum seekers work during the asylum procedure. Some leave, start working in the informal economy and seek support from welfare organizations while searching for a lawful residence (Staring and Aarts, 2010).

To gain insight into the numbers available to the labour market in the port of Rotterdam, we examine the publication "key figures asylum and migration April 2022", a monthly report issued by the Dutch ministry of justice and security.

The average first-time request acceptance, where asylum-seekers receive a refugee status, overall in 2022 was 69%, elevated by conclusions on lengthy procedures from previous years. Most allowances were from people arriving in the Netherlands 6 until 15 months before the decision. With 2,234 first requests in April 2022, an estimated 1,541 people + 849 following relatives were allowed to stay in the Netherlands per month, adding up to 28.680 people annually.

Considering the average annual number since 1980 being 24,324 (CBS, 2022), these numbers reasonably represent the historical influx.

Based on 31% not accepted on first application, some 8,310 people are rejected annually and are requested to leave the country; an appeal is possible, but on many occasions, the immigration service IND can not process appeal applications in time, causing families to stay in reception centres for years in doubt. How many people leave the country is hard to determine; in 2019, of the people reported to have left the Netherlands, only 45% were marked "demonstrable departure from the Netherlands".

An indication of the political powerlessness to solve this showed the 2007 general pardon when 27,000 people received a residence permit without the need to fulfil the conditions that kept them in the procedure for years. Although the demonstrable departure rate seems low, it is the largest in Europe, expressing governments' difficulties in solving this (van Hout and Leerkes, 2019). People arriving from "safe" countries are dealt with in a short limited procedure.

4.6 ASYLUM SEEKER'S LOCATIONS IN THE ROTTERDAM PORT AREA

Asylum seekers reside in the Netherlands in so-called AZC centres. After receiving refugee status, they spread out. For successful work in the port of Rotterdam, the distance to the AZC should be limited as the average distance employees travel in the Rotterdam area is 22 kilometres (CBS, 2020). Most asylum seekers are not allowed to drive a car or lack the financials to own one. Asylum seekers depend on a bicycle and employer arranged- or public transport, which in itself should not be a problem with a bus stop almost every 400 metres.

Most logical centres are limited in size, temporary and located in the direct surrounding of the port of Rotterdam, e.g. Middelharnis(75), 's-Gravendeel(375), Vlaardingen(70), Maassluis(70) and Krimpen aan den IJssel(63). The permanent AZC Rijswijk is located 25 kilometres from the port with a capacity of 500 people. These numbers indicate asylum seekers, refugees and people with a distance to the labour market are all required to solve Europe's biggest port labour shortage, with an estimated 8,000 vacant positions by April 2022.

The housing shortage in the Netherlands is high, with some 4% in 2021 expected to reach its peak in 2024 at 415,000 homes (Primos, 2020). For the people granted a residence permit and valuable to the port of Rotterdam, housing in the vicinity of the port needs to be considered despite the demand from society for the available houses. The port of Rotterdam needs to find creative solutions with local authorities and apply them in the spirit of the great entrepreneurs of the past.

As early as 1914, shipbuilder RDM build its own village Heijplaat to accommodate employees. RDM took care of Single-family houses with rooms and a garden, public buildings, sports fields, a school and even some churches. In the fifties, a retirement home was added, one of the Netherlands's first residential facilities for retired employees. Electronics giant Philips built a similar project (including a bread factory and a theatre), the company built houses for its employees that moved from plural areas to the Eindhoven region during the first half of the 21st century (Vriend, 1960). The Philips management copied the concept from industrial conglomerate Stork, which bought a 15-hectare piece of land at the beginning of the 20th century, where they created a neighbourhood for employees from all walks of life. More recently, Netherlands' largest high-tech company ASML was cited in a national newspaper, offering to contribute to the cost of building houses and infrastructure for 18,000 additional employees they expect to hire before 2030 (NRC, 2022).

Public-private cooperation in is needed around the port of Rotterdam. Prerequisites are in place with a record of 15.3 million TEUs (twenty-foot container equivalents) handled in 2021, the Port of Rotterdam Authority's EBITDA earnings of 512.2 million and an increase in deposits on the balance sheets of Dutch companies by 64.6 Billion Euro's in 2021 (CBS, 2022).

Rotterdams' business community needs to invest in housing for refugees to secure its own future, this required perseverance and political courage. There are no easy solutions if we have to find that, in the affluent Netherlands, 700 asylum seekers slept in unsanitary conditions outside a reception centre for a week in September 2022. It would have sufficed to rent some capacity of the 323,306 available hotel beds in the Netherlands (CBS, 2022). On the long term, the business community needs to invest in housing from a social, financial and economic perspective.

4.7 MIGRATION EFFECTS ON DUTCH LABOUR FORCE SIZE

Fluctuations in net migration numbers are significant; due to these fluctuations, forecasting migration for one year with accuracy is not possible. Average migration over several years is predictable by applying an Autoregressive integrated moving average (Arima) model (de Balk, 2022).

Predictability and regularity are essential to ensure investments (in housing, language courses, and education) remain politically and economically feasible.

In 1950 net migration per 1,000 Population was a negative 2,379. People encouraged by the government left poor conditions in the Netherlands for countries such as Australia and the United States (Ersanilli, 2014). In 1973 a peak of 2,799/1,000 population was measured. Numbers shifted to an immigration surplus, where the ratio stabilised since 2010 at around 1,200/1,000 due to growth of the total population (United Nations, 2022). As this inflow is continuous and relatively stable concerning the size of the Dutch population, there is room for permanent training institutions and education of immigrants. In the state budget, it seems wise to include permanent funds for housing, language courses and training of the immigrants. Host language proficiency is a highly relevant determinant of labour market performance (Budria, 2021).

Underlying this, we look at the people that were allowed to stay in the country temporarily or permanently. Since the nineties, the trendline has been climbing despite undulating. The average number of refugees entering the Netherlands since 2000 is more than 100,000 a year. Some of these people return to their country of origin or continue their journey to another country. Furthermore, the total number of people remaining in the Netherlands includes other migrants, which is visible in the second graph where emigration is included (CBS, 2022).

These figures show a continuous flow of refugees and migrants entering the Netherlands, which can be a valuable source of labour for the port of Rotterdam.

Figure 5 - Netherlands Refugee Statistics. Source: macrotrends.net

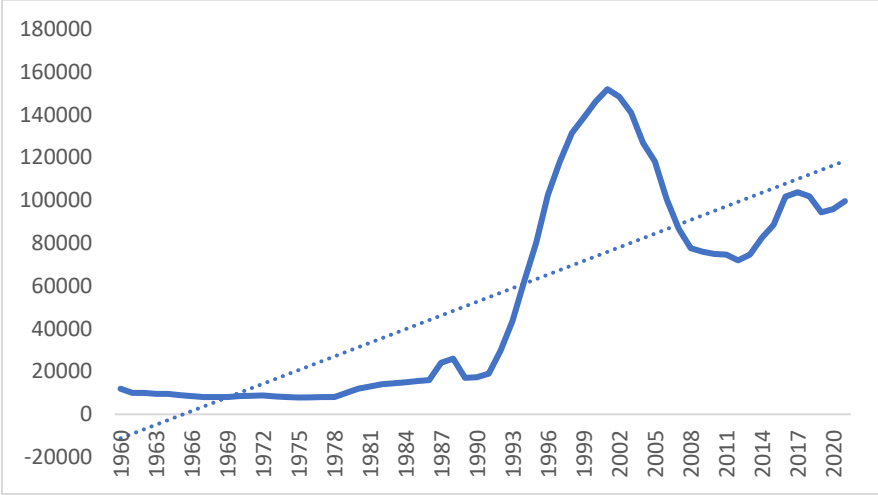
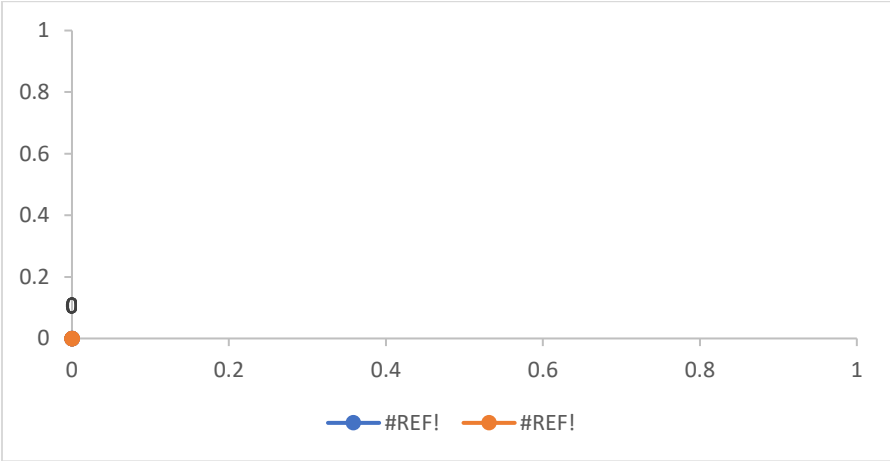


Figure 6 - Granted asylum applications and net migration. Source : World Bank



4.8 LABOUR PARTICIPATION IN THE NETHERLANDS

Not all asylum-seekers are admitted to the Netherlands, after submission, 44% of asylum seekers are eventually given a residence permit (Doornbos and Groenendijk, 2001).

Depending on the characteristics of the asylum seeker, admission rates vary; in addition, not all rejected leave the country. In 2015, 37.600 people from Syria and Eritrea applied for asylum in the Netherlands. In June 2021, a survey showed that 90% of these applicants lived independently in a Dutch municipality; lead time and repetition of requests, therefore, create a somewhat distorted picture (CBS, 2022).

After ten years, unemployment levels among people with a non-western migration background still exceed those of natives or western immigrants.

Over the past decade, unemployment every single year has been the lowest among people with a Dutch background and highest among people with a non-western background.

In 2014 the unemployment rate of 16.5 per cent of the non-western labour force declined harder than the overall average to 7.3 per cent in 2019, followed by an increase to 8.2 per cent in 2020. Among people of Dutch origin, unemployment decreased to 2.6 per cent in 2019 and increased in 2020 to 3.0 per cent (CBS, 2022).

In 1975 Suriname became independent. From then on, Surinamese were no longer automatically Dutch citizens. This situation led to the fear that emigration to the Netherlands would become impossible. In the year of independence, 40,000 people left the impoverished country for many unfamiliar Holland. Housing was unavailable, there was xenophobia in the Netherlands, and many people ended up in boarding houses in deprived neighbourhoods like the Bijlmer in Amsterdam under miserable conditions (Stadsarchief Amsterdam, 2020).

The unemployment rate in the Netherlands increased from 1,5 percent in the years 1968-1973 to 4,9 percent in 1973-1979 (Hartog, 1993). As early as 1975, researchers determined the unemployment rate among Surinamese people was significantly above the average (Biervliet, 1975). The second generation is better absorbed in the labour market.

Nevertheless, there remains a difference with native Dutch people not only among Surinamese but also in other immigrant populations in the Netherlands, such as Turks, Moroccans and Antilleans. In 2007 Dutch statistics bureau CBS estimated the number of 1st and 2nd generation Surinamese at 333,504 people, with continuous labour market arrears in this immigrant group in the second generation. Surinamese experience advantages over other immigrants because their parents grew up in a society with a culture and school system similar to that of the Netherlands. (Liem and Veld, 2005).

In 2006 45,3 per cent of marriages in the Surinamese community were interethnic (CBS Statline, 2006).

Some 29 per cent described themselves as Dutch of Surinamese origin. The desire to live in Suriname was answered affirmative by 19 per cent of the women and 29 per cent of the men. The remaining people do not know or consider emigrating for a short period only (Ham, 2008).

Table 7 - Unemployment first generation, percentage of 15 to 75 year-old labour force. Source : CBS

	2003	2007	2011	2015
Dutch	3,9	3,4	3,9	5,6
Turkish	10,6	6,8	8,3	10,5
Moroccan	14,8	8,8	11,2	15,7
Surinamese	8,5	5,4	7,9	13,2
Antillean	15,1	12,3	17,1	18,1

Table 8 Unemployment second generation, percentage of 15 to 75 year-old labour force. Source : CBS

	2003	2007	2011	2015
Dutch	3,9	3,4	3,9	5,6
Turkish	12,8	12,1	13	18,4
Moroccan	25	12,3	12,2	21,7
Surinamese	13,2	14,4	12,4	16,1
Antillean		5,6	12,6	15,3

The proportion of Surinamese in Rotterdam increased from 7,8 to 8,4 per cent between 1995 and 2015, forming a significant group of potential port employees.

4.9 DECISIVE FINANCIAL FACTORS

To determine the feasibility of successful entry into the port of Rotterdam labour market, we need to select the financial costs and benefits connected to the labour market and the value added by the refugees entering this market.

4.9.1 STAFF SHORTAGE COSTS

In 2022 a news and current affairs programme on Dutch National television, issued a survey amongst Businesses in the Port of Rotterdam concluding about 8,000 job openings on 380,000 people employed and losing hundreds of millions of Euros (Nieuwsuur, 2022). As a result, companies lost around 10 per cent of their annual turnover due to forced work refusal caused by staff shortages (NLTimes, 2022). The scale of the aforementioned loss becomes clear when we look at the contribution of the port of Rotterdam to the Dutch GDP in 2018 that accounted for €45.6 billion (6,2 per cent).

This GDP contribution includes direct employment, added value, and indirect effects of economic activities that can only take place thanks to the presence of the port, such as logistics and distribution (Kuipers et al., 2018).

4.9.2 CHEAP LABOUR BENEFITS

Immigration replenishes the pool of potential employees, and the relationship between supply and demand implies that lower demand has a downward effect on the price of labour. After filling the 8,000 unfilled vacancies in the port of Rotterdam, there will be downward pressure on the labour price, which will positively affect the profitability and competitiveness of the companies in the port. Without migration, labour costs can be reduced by efficiency improvements, automation or relocating activities to countries with lower wage levels, where lower productivity often negates potential savings (DePamphilis, 2022). In the case of ports, the service's physical relocation is impossible. Importing cheap labour to a certain extent is possible.

4.9.3 EDUCATIONAL COSTS FOR NATIVES

The average cost for parents of raising a child from birth until their eighteenth birthday in the Netherlands is estimated at € 80,000 according to FDP, a Dutch federation of financial planners and statistics bureau CBS. For immigrants entering the Netherlands later, some costs were paid in the country of origin. In contrast, there will be costs to take education, skills and language proficiency to the desired level.

4.9.4 LANGUAGE COSTS FOR IMMIGRANTS

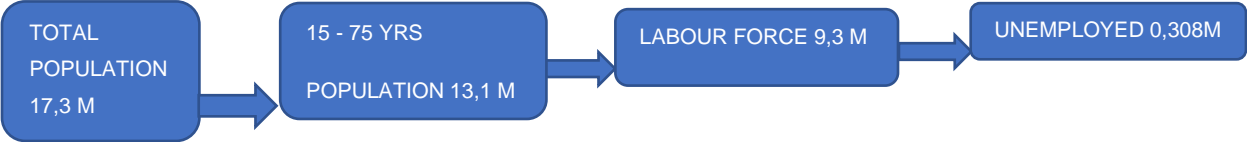
A frequently cited American study by the now defunct consultancy LECG in cooperation with The Wharton business school of the University of Pennsylvania, established that mastering a particular language leads to a 2 per cent income increase. Language proficiency increases the chances of gainful employment.

4.9.5 AVERAGE UNEMPLOYMENT RATES QUALIFIED AND VALUED

Unemployment rates relate to precisely identified groups. The statistical office divides the population into steps. First, the population under 15 and above 75 years are filtered out. Next, the non-working population is filtered out; this group amounted to 3.7 million in 2019. This concerns people who have been unemployed for a long time and are no longer looking for a job because they consider themselves hopeless.

People might face a lack of education or language skills and people who do not want to work, for example, because they choose to care for their children (CBS, 2019).

Figure 7 - Unemployment definitions CBS 2019



In December 2021, CBS reported 336,000 people unemployed according to this methodology, equivalent to 3.4% of the labour force. Staff shortages previously called out by trade unions became more acute. In a publication on the Dutch labour market, a Dutch bank reported 105 vacancies for every 100 unemployed. The net employment rate (the active labour force as a share of the population) was higher than ever, at 71 per cent (ABN-AMRO, 2022).

The industry reported turnover losses with 387,000 vacancies nationwide, while possibilities to increase the workforce are limited. Immigration could possibly provide part of the solution to the shortage (ABN-AMRO, 2021).

Figure 8 - Labour participation and migration background 2022

	Labour force	Salaried	
	Population	Self-employed	
2022 Q1	15-75 Years	15-75 Years	Ratio
Total	9,768,000	9,412,000	96,36%
Dutch background	7,308,000	7,096,000	97,10%
Western migration	1,075,000	1,029,000	95,72%
Non-western migration	1,376,000	1,279,000	92,95%
Morocco	221,000	207,000	93,67%
Turkey	250,000	232,000	92,80%
Suriname	208,000	194,000	93,27%
Antilles	99,000	92,000	92,93%
Other non-Western	598,000	554,000	92,64%

The definition of persons with a non-western migration background at CBS is people originating from Africa, Latin America, Asia (excl., Indonesia and Japan) or Turkey. In CBS databases, people fleeing from Ukraine (Europe) and Russia (Europe and Asia) are marked as western migrants.

Using past figures as a guide, we estimate the future labour participation of two of the largest groups of migrants in 2020, Syrians (non-Western migrants) on the one hand and Ukrainians (Western migrants) on the other.

By placing differences in unemployment side by side and combining this with CBS-StatLine, the average cost of an unemployed person, we can value the higher unemployment rate per group. We only look at the so-called welfare benefits for status holders who have not worked. Those who have worked are often entitled to unemployment benefits higher than social assistance. In addition, there are allowances in the Netherlands for people with a low income for care, rent, and other expenses. These are excluded from the calculation; the listed costs represent a minimal value.

Table 9 - Dutch annual social assistance benefits 2021

	Dutch	Western	Non-Western
Unemployment share	3,64%	4,28%	7,05%
Unemployment number	356,000	46,000	97,000
Welfare costs	€ 4,113,879,057	€ 531,568,642	€ 1,120,916,485
Annual costs per Dutch citizen	€ 238	€ 31	€ 65

4.9.6 PRODUCTIVITY LOSS BECAUSE OF LABOUR SHORTAGE

In 2006, Freeman concluded that expected labour shortages, agreed upon by economists then, were exaggerated. He considered these projections were used to encourage immigration.

Globalisation was in full swing, and balance would return to the labour market through a rapidly growing young population in developing countries and an ageing population in developed countries, the shift of supply and demand of products and services around the world, and government policies to manage this. In his closing speech, Freeman made a prediction that was looking back clairvoyant: "Finally, if I am wrong and there is to be a significant labour shortage in the foreseeable future, I believe that it will come not from demography but from events that the shortage soothsayers ignore - a global pandemic that kills millions of people; climate change that destroys parts of economies; political insanity that produces barriers to trade, migration and capital flows around the world (Freeman, 2006). Each of the doomsday scenarios became a reality to a greater or lesser extent.

On 30 December 2019, a Chinese ophthalmologist warned hospitals in the region about mysterious infections among his patients. The man was not believed and eventually died of SARS-CoV-2. The disease, later known as Covid19, had a devastating effect on economies and caused an estimated 6.5 million global deaths (WHO, 2022). Most economists agree that supply chain disruptions caused by production shutdowns, quarantine periods, and lockdowns are one of the leading causes of the 2022 labour shortages.

Morgan Stanley reported costs of climate disasters from 2016 to 2018 in the United States at \$415 million, mainly due to wildfires and hurricanes. The sector most vulnerable to climate change is agriculture. Extreme rainfall causes flooding, making fields impassable, and livestock drowns; consequently, agricultural products rise in price, causing global economic disruption. Crops such as soybeans (widely used in the animal feed industry) do not grow well at higher temperatures. The National Academy of Sciences expects each grade temperature increase reduces arable production by 5 to 10 per cent. Rising sea levels could lead to damage to ports, houses and infrastructure. The effects and the emergence of the associated costs will occur more or less simultaneously in several places in the world (Cho, 2019).

The US-China trade war following the inauguration of US President Trump in 2017 resulted in protectionist measures on both sides of the ocean.

Global capital flows continue to grow while focusing shifts toward services and sustainable investments. The most significant Foreign Direct Investments(FDI) of 2016 occurred in old-fashioned sectors like coal, oil & gas, and real estate; however, substantial growth was achieved only in the renewable energy sector. The influence of private equity is increasing, and more emphasis on sustainability is trending. After the Covid pandemic, some countries promoted production closer to home (inshoring). Globalisation, however, seems to continue unabated (BCG, 2021).

4.9.7 SOCIETAL COSTS OF IMMIGRATION

"Because of the political sensitivity and methodological problems, good research into the economic effects of immigration on the welfare state is scarce. You can always find what you are looking for", says Emeritus Professor Han Entzinger of Erasmus University Rotterdam.

There is a fear among European governments for a cost-benefit analysis of the effects on the welfare state as results might be selectively applied and interpreted and fuel xenophobia (Entzinger, 2022).

4.9.8 IMPLICATIONS FOR THE HOUSING MARKET

In the Netherlands, the housing market is tight, supply is stagnating, and demand is growing, partly due to low-interest rates in the years up to 2022. Additional pressure on the housing market caused by immigrants limits the support for immigration and, therefore, also for granting residence permits to asylum seekers.

In thesis research at the Faculty of Governance and Global Affairs of Leiden University in 2021, the effect of immigration on house prices in the Netherlands was investigated.

Table 10 - Effect of immigration on housing prices

	Overall housing prices	Neighbourhood housing prices	District housing prices
Population growth by immigration 1%	0,78%	-0,46%	-0,26%

There is an overall effect (for every per cent population growth due to immigration, a price increase of 0.78 per cent) because there is less housing supply as space is filled by immigrants. In addition, there are adverse effects in neighbourhoods and in districts because inhabitants who enjoy a higher income leave when there are too many immigrants in the communities and districts (Korbee,2021).

It is essential for policymakers to recognise the impact on the housing market, as depreciation for existing homeowners is not favourable for the chances of building a network with natives from which paid employment could emerge, “social networks are key to refugee integration” and “stronger social networks have a positive impact on language acquisition” (Vukojevic, 2018).

4.10 CONCLUSIONS

Real disposable income in the Netherlands increased by 50 per cent since 1970 while average annual working hours decreased by 15 per cent.

The labour market in the port of Rotterdam is affected by an ageing Dutch population and a similar effect in traditional emigration countries. In the port of 2022, there are hard-to-fill vacancies next to unqualified unemployed people. Port entrepreneurs compete with better-paying sectors, such as the petrochemical industry, for the available human capital. A fair proportion of the unemployed face a distance to the labour market, which also applies to asylum seekers and refugees.

Emerging technology could solve a part of the labour market shortages; at the same time, new jobs will emerge linked to technological developments. Inadequate command of the Dutch language is observed among virtually all asylum seekers and refugees.

In English and literacy proficiency, values differ, mainly because of the different development phases of the country of origin. On average, refugees are younger than Dutch nationals, less educated and more often male. An exception is a group of primarily female Ukrainians.

Asylum seekers are allowed to work to a limited extent during the procedure. Labour participation depends on the country of origin and improves over time. From the surrounding AZCs, Rotterdam's port areas can be reached by public transport. Therefore transport to the port companies is not a problem; housing, however, is a problem in Rotterdam; in the past, large employers build houses for their employees.

Financial losses for companies caused by a shortfall of 8,000 staff members in the port of Rotterdam count up to hundreds of millions of Euros in 2022; activating refugees and immigrants could lower labour costs and improve corporate profits. Most immigrants need supplemental education after arrival in the Netherlands. Language proficiency increases successful integration and wages for immigrants.

Migrants are expected to continuously arrive in the Netherlands in the following decades. Immigrants have been at a disadvantage in the labour market since the 1950s. The unemployment rate in 2020, six years after arrival, was 27 per cent higher than that of native Dutch. A good 80 per cent of the Dutch call themselves politically moderate, but government policies are geared towards returning asylum seekers resulting in work restrictions and prohibitions.

5 INTERNATIONAL DEVELOPMENTS

5.1 INTRODUCTION

To determine decisive factors regarding labour participation in the port of Rotterdam, local factors are important, which we examine in the remaining chapters. We look at some international situations to provide background to the conclusions and see if there might be similarities with current cases elsewhere.

When similarities could be identified with the problems and solutions found in other countries, it might be interesting to study further whether aspects of policies abroad could be helpful and relevant within the context of the Rotterdam port.

5.1.1 REFUGEES IN THE UK AND GERMANY

According to UNHCR statistics, as of mid-2021, over 370,000 people who originally arrived for asylum lived in the United Kingdom (UNHCR, 2021). Employment and salary changes until 20 years after arrival were investigated in a two-year study conducted by the Centre on Migration, Policy and Society (COMPAS) from the University of Oxford in 2019. Asylum migrants were distinguished from other migrants (employment, family, study). A finding was an employment rate of 51 per cent of this population compared to 73 per cent for UK-born inhabitants. The 22 per cent gap was reduced to a still substantial 12 per cent after adjustment for socio-demographic characteristics. Many of those who found a job relied on public agencies (e.g. job centres) because of the lack of a social network. At these centres, less paid jobs are offered, correlating with an average of 38% less hourly wage; also, more frequent self-employment was observed. Mental health issues were more common in this group caused by traumatic events such as violence and oppression in the country of origin (Kone et al., 2019).

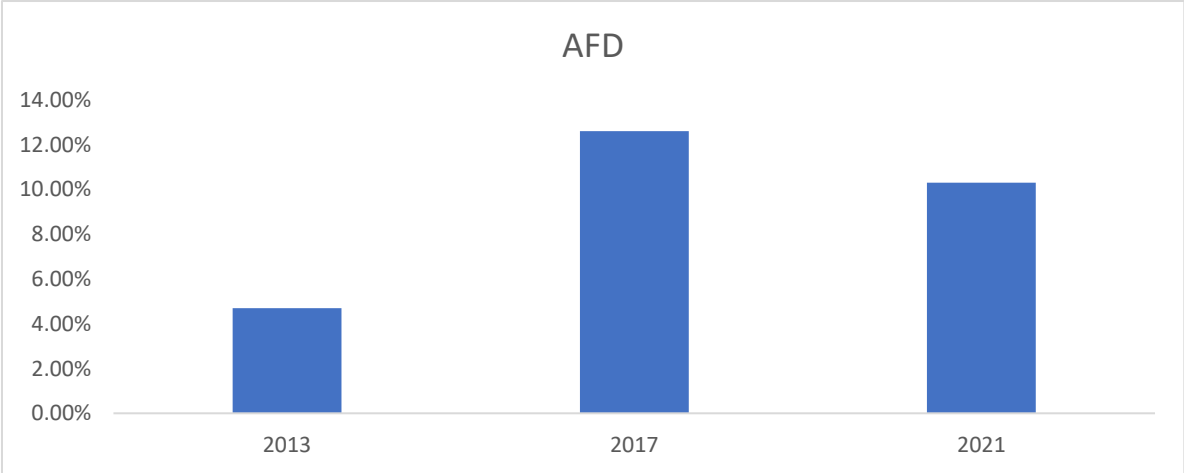
During an EU forum on Migration, Klaus F. Zimmermann from Princeton University discussed constraints for labour market integration, expressing support for granting more rights and promoting diaspora, despite controversial issues where people fear what they do not know. Especially in parts of Europe like Italy and the former Soviet Union states, there is much anti-immigration sentiment. From a global scientific perspective, there are signs of adverse effects on employment for low-skilled natives. However, papers show natives move out of low-quality jobs to make space for migrants and often end up in better-paid jobs.

Europe's governments have different positions in the migration debate, while a multilateral solution is more beneficial for all parties. Zimmermann referred to German chancellor Angela Merkel solving the problem for other countries instead of the shared "burden"; a suggestion is made to solve this by financial compensation for countries accepting refugees funded by governments choosing a restrictive approach. The EU border areas where refugees arrive need profiling centres to enable selection by skill, capacities and possibilities and allocation across Europe in an early stage. Zimmermann expresses the need for circular migration to solve illegal migration, undeclared work and permanent stay. For general migration, the labour market can serve as a filter demanding people to provide evidence of having a job and can afford to live in a country. This filter is no feasible solution for asylum seekers and refugees.

At the traditional August 2015 summer press conference "Zu Aktuellen Themen" following a visit to a refugee camp in eastern Germany, Merkel stated Germany could absorb large numbers of immigrants by uttering the words "Wir schaffen das" (we can manage). She spoke the words in reaction to a migrant crisis caused by conflicts in Syria, Iraq and Afghanistan and aggravated by neighbouring countries rejecting asylum seekers from Syria (Phoenix, 2015).

Politicians engaged voters who were dissatisfied by pointing out the negatives of these policies, causing a surge in supporters of the populist far-right party AFD (Alternative für Deutschland). Shortly after these effects became apparent, an opinion poll revealed that many former eastern Germans thought the shift from communism to capitalism did not transform their lives as they had hoped (The Guardian, 2019).

Figure 9 - AFD in Federal elections



Continued growing unemployment rates among this group of immigrants reinforced sentiment. Despite falling unemployment in Germany during these years, the unemployment rate among people who arrived in Germany during this crisis increased from 10,6% in 2016 to 29% in 2020 (IW, 2020). The lack of command of the German language seems to have played a significant role, as in the country, German language skills are decisive for labour market adoption (Thöne, 2020).

5.2 SUCCESSFUL GLOBAL BUSINESS INITIATIVES

During the Davos World Economic Forum, 2022 integration of refugees into Labour Markets was discussed. Ebru ÖZDEMİR, chair of the board of Turkish construction conglomerate Limak, emphasised that refugees should be considered an opportunity. The human capital of 4 million refugees in Turkey at the time of the meeting should be used to benefit society and the companies operating in that society. The company is active in complex technical operations, and the refugees typically are not yet capable of fulfilling the vacancies in this area. Because of the skill and language arrears, the company hired them in supportive areas, supported engineers to acquire a Turkish master and created role models.

Valerie Beaulie, chief sales and marketing of the Adecco Group, concluded barriers are more or less the same on all occasions, and regulations limit people to work. When three million people from Ukraine entered the EU, all of a sudden, the European Commission enlightened restrictions by a directive (based on dormant Balkan war legislation) within weeks. Language proficiency is another decisive factor, next to qualifications from the country of origin that are not recognised in host countries. The last major issue observed by Adecco is housing. Beaulie mentioned Adecco's cooperation with 1,500 companies to integrate refugees into the Labour Market.

Nicolas Smit, European Commissioner for Jobs and Social Rights, stated that sooner access to the labour market benefits all stakeholders but noted in addition that some countries oppose immigration. Therefore, the regime applicable to Ukrainians is unlikely to apply to future flows. The refugee talent hub is an employer initiative organising company visits, courses and work-related activities. In 2022 blue chip companies (e.g. Unilever, Microsoft, Ikea) partnered up, looking for people blessed with a talent to fill gaps in their workforce.

5.3 CONCLUSIONS

We can observe some similarities between refugees in the Netherlands and the two neighbouring countries studied. Available statistics show a long-term lower employment rate compared to natives, as well as lagging wages.

Language proficiency also seems to be an essential factor for successful integration in other countries.

Business initiatives with seemingly promising results are taking place in several European countries, with non-harmonised legislation having a limiting effect on participation. The unclear and fickle legislation mentioned by Dutch entrepreneurs is confirmed by captains of industry from large European companies.

6 RESEARCH FINDINGS

6.1 INTRODUCTION

We describe the characteristics and backgrounds of the participants in our study and explain them in more detail. We show the answers of the participants and their relation to the whole. We describe with each question the picture that emerges from the responses, a more detailed explanation from the literature, and the similarities and differences with situations in other locations.

6.2 INTERVIEWEES' BACKGROUND

The respondents reflect the people in managerial positions in the business community in the port of Rotterdam.

The selected group is not diverse; Dutch-born white middle-aged and older men make up 85,3% of the respondents.

This distribution does not correspond with the composition of the Rotterdam population, where 9.206 more women than men live and 38 per cent have a non-western foreign background. Possibly one of the causes of limited labour participation by women is because the port is traditionally a man's world. Moreover, despite a tolerant, progressive image that most Dutch people claim, there seems to be a form of institutional racism that systematically discriminates against people based on colour or gender in the Rotterdam port area, as in many places (Wekker, 2016).

Table 11 - Port of Rotterdam survey respondents

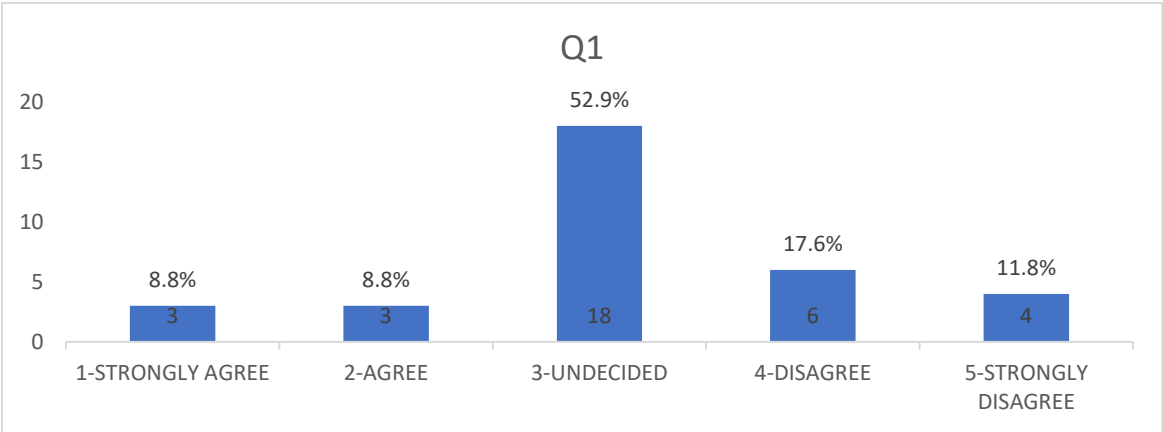
Sample group	38				
Respondents	34				
CEO	29,41%				
COO	41,18%				
Director	29,41%				
Male	85,30%				
Female	14,70%				
		CEO	COO	DIRECTOR	
		Agencies	3	4	1
		Airfreight		1	
		Authorities		1	
		Insurance			1
		Logistics	4	6	3
		Oil and Gas		1	
		Recruitment			3
		Technology	1	1	
		Trading	2		2

We reached an 89% response rate from a meticulously framed group of 38 people in critical positions; nevertheless, the sample size of 1 per over 92,58 people reduces the power of our study and increases the margin of error. Additional research should take place in a larger population to offer more certainty. Five women completed the survey representing 14,7% of the participants. The background of the people we approached is summarised in the table below.

6.3 PROFITABILITY OF REFUGEE DEPLOYMENT

Q1: “Hiring refugees or asylum seekers in our company would be good for business from a financial point of view.”

Figure 10 - Survey Question 1 responses



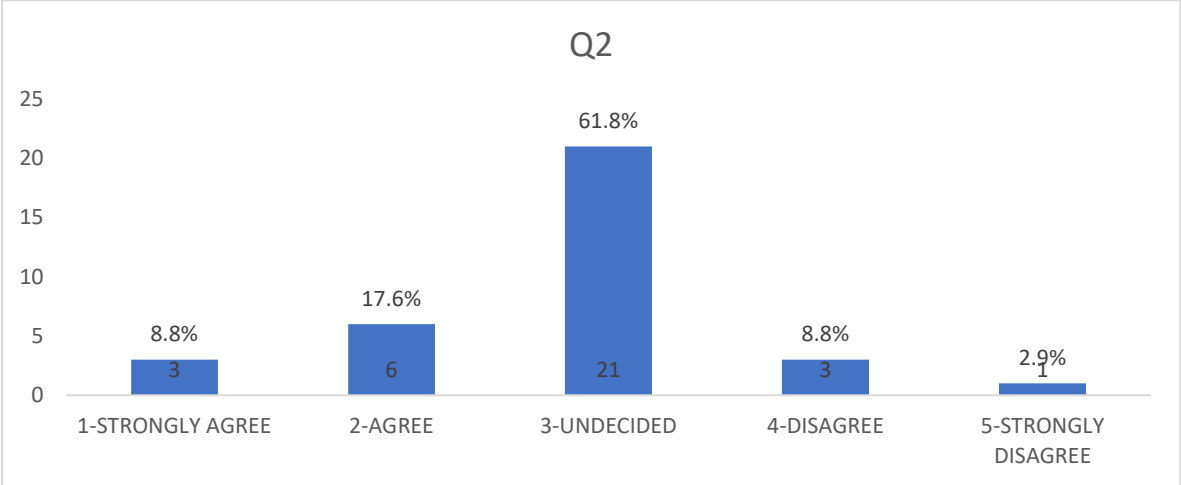
A slight majority of 52,9 per cent choose a neutral three out of the five options scale, supporting the 2015 employer consultation. Decades lasting inflow of refugees has not led to decision-makers gaining new insights into the profitability of refugee deployment.

Although fit for training programmes and sharing lessons learnt in the past would significantly affect the chances of a positive business case (Sultana, 2022), this information has not descended in the board rooms in the port of Rotterdam yet.

6.4 MAIN MOTIVATION FOR EMPLOYING REFUGEES AND ASYLUM SEEKERS

Q2: “Disregarding social responsibility, I would be willing to hire refugees and asylum seekers in our company.”

Figure 11 - Survey Question 2 responses



The answers to this question confirm the picture that arose from the answers to question 1, the number of potential employers who strongly disagree, and thus, in fact, indicate that they certainly do not hire refugees for usual business reasons is limited to only 1 of the 34 respondents.

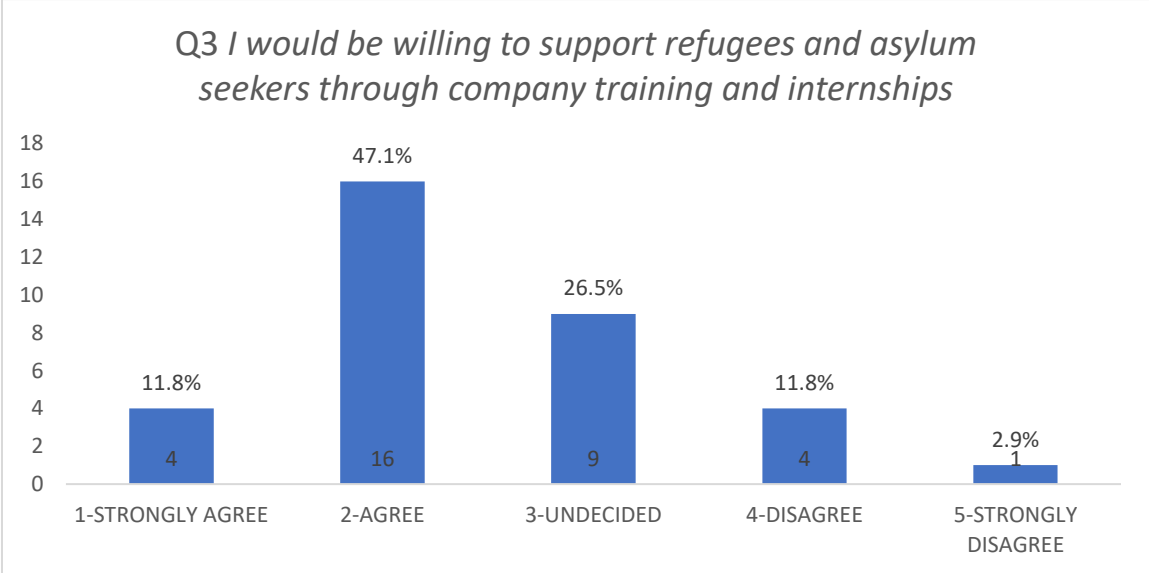
The share of participants that would certainly hire is also small at 8,8 per cent. A majority of 61,8% does not seem to be sure of their case and assess it on a case-by-case basis. It seems reasonable to assume that on this basis, employers are not convinced of the commercial benefits of refugee deployment.

A one-size-fits-all policy for the integration of asylum seekers in the port of Rotterdam labour market does not seem enough to convince employers.

6.5 WILLINGNESS TO SUPPORT THROUGH INTERNSHIPS AND TRAINING

Q3: “I would be willing to support refugees and asylum seekers through company training and internships.”

Figure 12 - Survey Question 3 responses



The answers express the willingness of 58,9 per cent of the employers to invest in refugees, only one of the 34 respondents completely rejects in-company training and education.

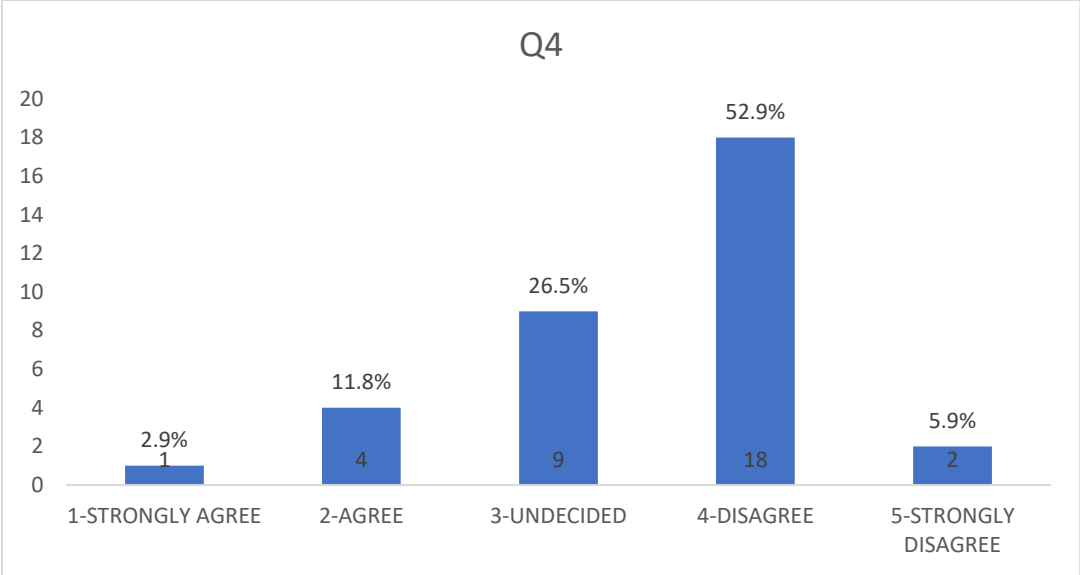
The necessary training may vary a lot. A refugee from Afghanistan or Somalia, where about 60 per cent of the population is illiterate, needs a different approach from Turkey and Ukraine, where this is a virtually unknown phenomenon. Due to the many conflicts in the world, it is impossible to predict the magnitude of the next migration waves we know are coming; however, employers do not seem to be willing to invest in all.

Targeted and adequate investment in this group of immigrants seems justifiable from an economic perspective.

6.6 DEPLOYMENT IN MANAGERIAL POSITIONS

Q4 : “I would be willing to hire refugees and asylum seekers in middle and senior management positions.”

Figure 13 - Survey Question 4 responses



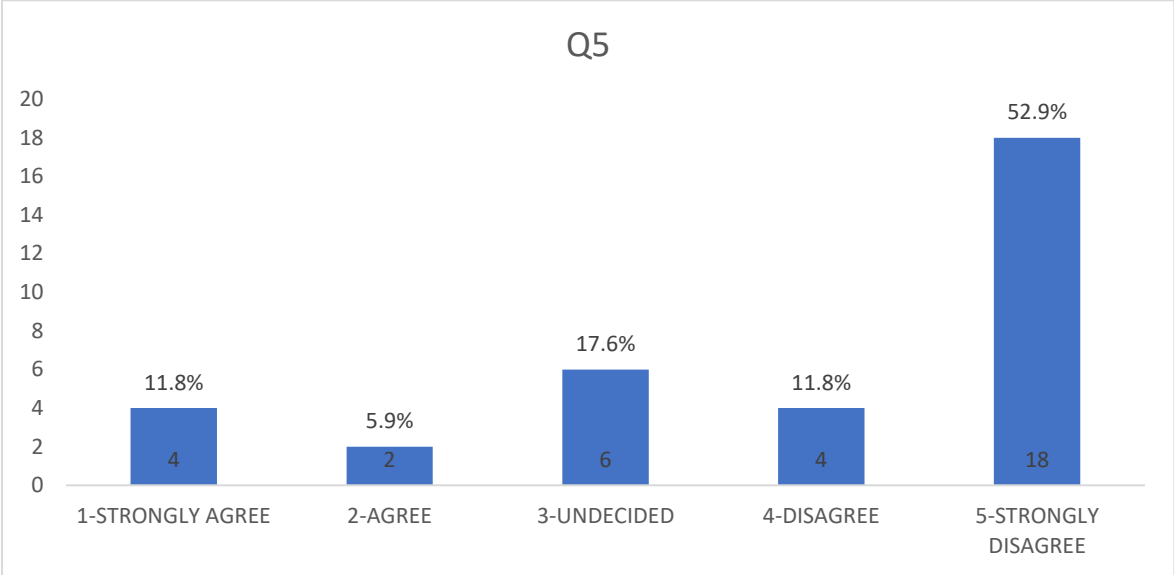
For the port of Rotterdam harbour guild, this seems a bridge too far. Disagree (4) is the option chosen by a majority of 52,9% (18 of 34) of the respondents. It is somewhat difficult to answer without substantive knowledge of education level and especially language proficiency. Since the Schengen agreement enables every EU citizen to travel, work and live in any EU country without border checks or restrictions, asylum seekers will arrive from poorer eastern European regions and other continents.

A senior management position requires a range of qualifications that refugees will not be able to meet in full, such as language proficiency, work ethic and education. This may have been decisive in the answers to these questions, but culture and religion might also be a factor. In only five other countries in the world, Dutch is an official language (Belgium, Suriname, Aruba, Curacao and St. Maarten); therefore, most asylum seekers will not know the Dutch language. This lacking language knowledge could be one argument why executives in the somewhat traditional port of Rotterdam business society indicate that they are not likely to hire this group for higher positions.

6.7 LEGAL AND REGULATORY KNOWLEDGE

Q5 : “I’m fully aware of the rules and regulations involved in hiring asylum seekers and refugees in the Netherlands.”

Figure 14 - Survey Question 5 responses



The intention of this question is to assess whether more publicity and information from the various government agencies and non-governmental organisations, as well as commercial intermediaries, could contribute to hiring a larger percentage of refugees and asylum seekers than is currently the case.

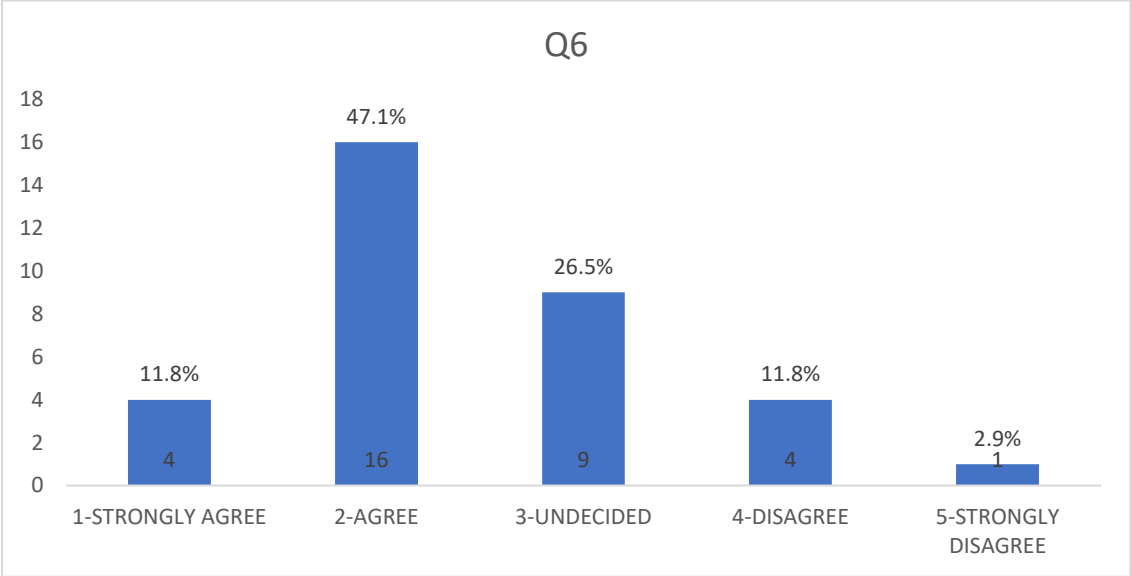
Since a majority of 64,7% indicates they are not fully aware of current laws and regulations, this is an essential task for all stakeholders.

Only 11,8% strongly agree to be fully aware of the applicable laws and regulations, and another 5,9% agree. Given the previously noted inconsistencies on informative websites, it is doubtful that anyone not involved professionally is sufficiently aware of the regularly changing laws and regulations.

6.8 ASSESSMENT OF CERTIFICATES AND DIPLOMAS

Q6 : "It is difficult for me to assess the value of foreign certificates and testimonials in the Dutch/Rotterdam context."

Figure 15 - Survey Question 6 responses



A majority of 58,9 cent indicates some difficulties in this area. These difficulties can be explained by the diversity of countries of origin of the asylum flow in the Netherlands. The IND Business Information Centre (BIC) Asylum Trends June 2022 report shows a varied total one-month asylum influx in the Netherlands, consolidating first applications, repeated applications and family reunification influx.

Table 12, based on this report, shows the country of citizenship for the first applicants in June 2022. Assessing documents from 33 different countries seems like a complex matter.

The increase in minimum rates paid to interpreters and translators in 2022 by the Minister of Justice and Security should be viewed in this light. Although Europe has stringent privacy legislation, it is worth investigating whether at least part of the data about a person generated during the asylum procedure can be made available to potential employers so that they do not have to repeat the entire completed investigation with all the difficulties that entails.

The table shows various countries of origin, with different educational systems and documents prepared according to local standards in other languages. This diversity increases the demand for a staff capable of assessing certificates and fathoming stories brought forward.

Table 12 - June 2022 first applications in the Netherlands

No	Country of citizenships	First application
1	Syria	918
2	Turkey	292
3	Afghanistan	209
4	Eritrea	87
5	Algeria	77
6	Somalia	70
7	Morocco	47
8	Russia	44
9	Iran	37
10	Pakistan	30
11	Iraq	29
12	Nigeria	26

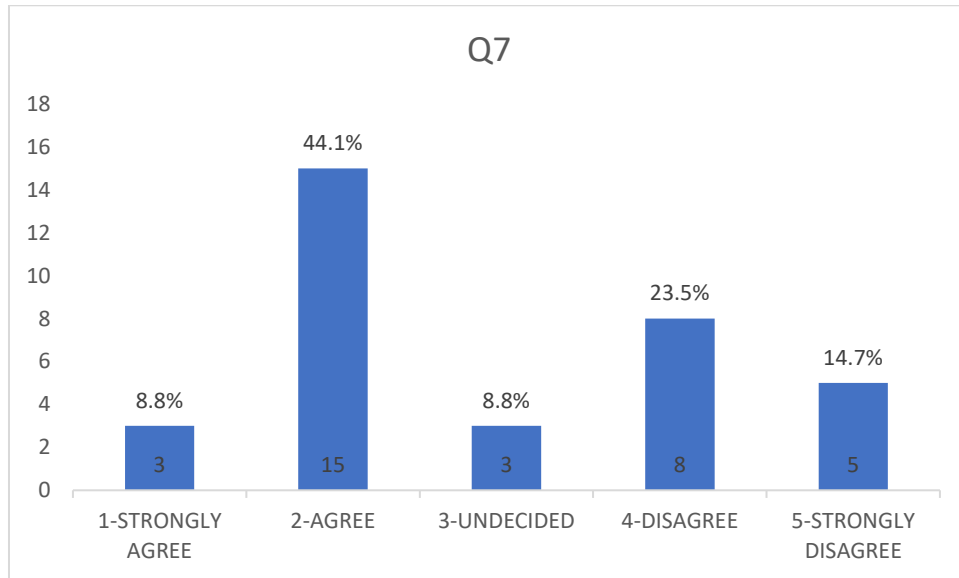
No	Country of citizenships	First application
13	Colombia	22
14	Egypt	20
15	Ethiopia	20
16	Tunisia	19
17	India	17
18	Azerbaijan	15
19	Moldova	14
20	China	13
21	Lebanon	13
22	Albania	12
23	Sudan	12
24	El Salvador	10

No	Country of citizenships	First application
25	Georgia	10
26	Guinea	10
27	Saudi Arabia	7
28	Libya	6
29	Myanmar	6
30	Belarus	5
31	Congo	5
32	Gambia	5
33	Mexico	5
34	Palestina	5

6.9 PRODUCTIVITY EFFECTS LANGUAGE PROFICIENCY

Q7 : “Dutch language proficiency A1 (basics) is essential for my willingness to hire asylum seekers and refugees ,a reasonable command of English is insufficient”

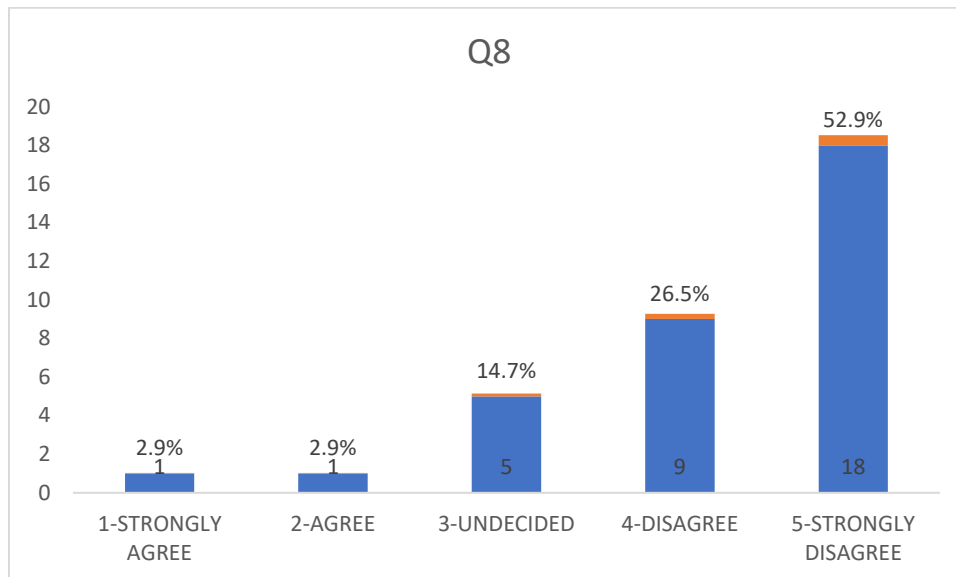
Figure 16 - Survey Question 7 responses



The majority confirm this statement with a total of 52,9 per cent of the respondents. Interestingly, there is a significant group of 38,2 per cent who do not find Dutch proficiency sufficient. To ensure a good understanding of the question, a reasonable command of English was added. This indicates that several people with a good command of the English language could enter the labour market before learning Dutch. This insight offers valuable opportunities for selection at the gate, social integration and works safety. Newcomers will need to learn Dutch; however, this can be learned later, for example, at the workplace, so paid work can start before, the cost for society decrease and the immigration process can be shortened.

Q8 : “I know which organization I can approach for hiring asylum seekers and refugees”

Figure 17 - Survey Question 8 responses



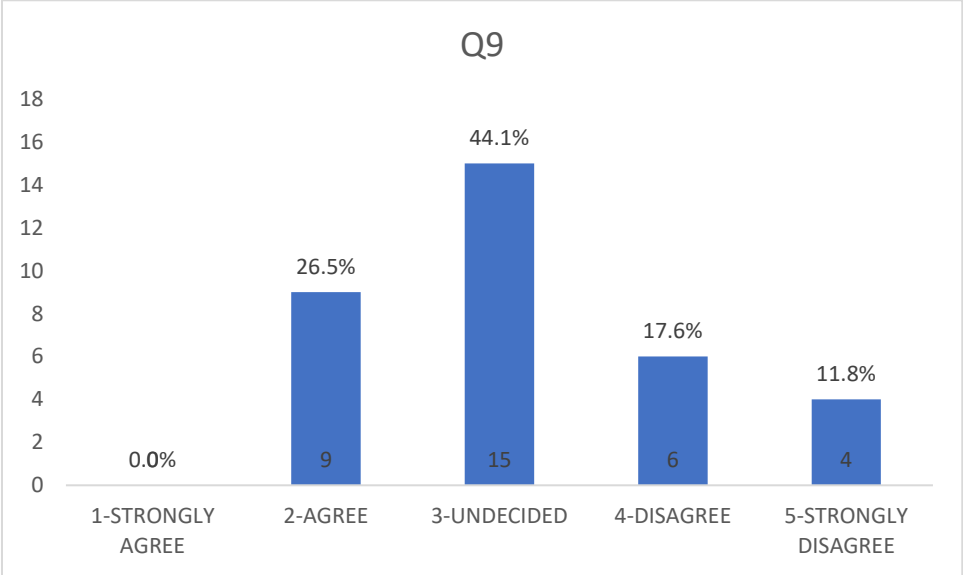
A solid 79,4% of the respondents disagree. There seems to be room for coordinating and perhaps directing the government.

The Dutch liberal system has led to a jumble of organizations and companies that are all involved in finding work for asylum seekers and refugees from their perspectives. The most prominent companies in the country have the resources and people to direct these processes within their organization, and the need for profitability within these organizations could lead to the recruitment of the most promising individuals. Existing counters such as werk.nl of the UWV national employment agency could be helpful to mediate ignorant employers. The continuous development of new initiatives and the establishment of new organizations have not led to improved access to this labour pool by Rotterdam workers. In this area, less should be left to the market, and the government should play its role, partly because of the economic potential and social importance.

6.10 PUBLIC OPINION AND MEDIA IMPACTS

Q9 : “Media coverage of asylum seeker and refugee inflows enhance my willingness to hire asylum seekers and refugees”

Figure 18 - Survey Question 9 responses



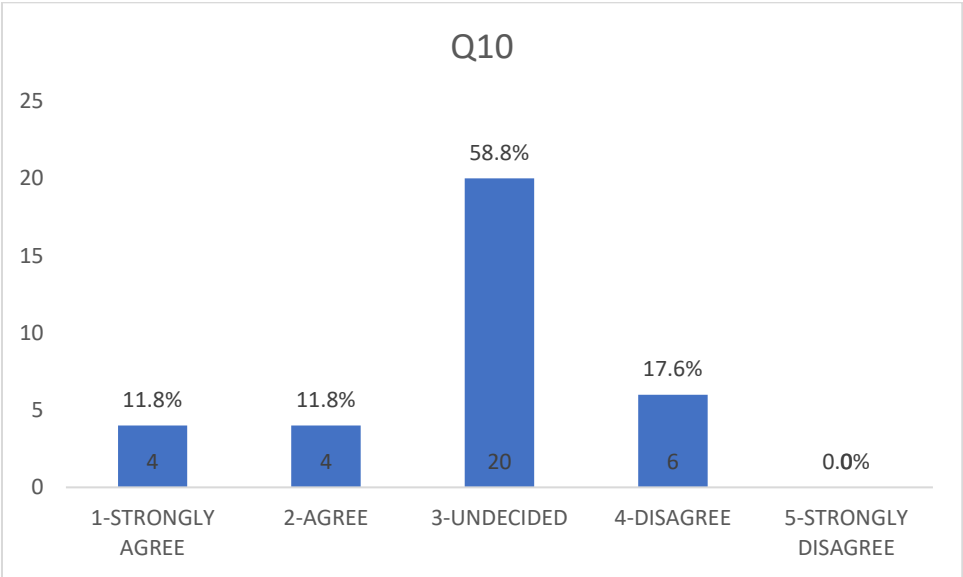
Media coverage seems to enhance the willingness to hire asylum seekers and refugees for roughly half of the population, whereas media reports do not significantly influence the other half. Despite widely commented populist anti-media sentiments, according to a Pew Research Centre 2018 survey, adults on the left and right share the same primary news source.

The biggest group of respondents choose option 2 (agree), stating that media coverage does influence their willingness to hire. As we did not survey the direction of their opinion nor the details of the media report, we cannot assess if public media does play a vital role or not. It would be interesting to visualize the effects of certain covert events on the opinions of the public and, more specifically, the decision-makers in the port of Rotterdam in a future investigation.

ADDITIONAL CLARIFICATION QUESTION

Q10 : “Cost and time involved to improve language proficiency and work ethics reduces our willingness to hire asylum seekers and refugees”

Figure 19 - Survey Question 10 responses



The answers indicate that employers are willing to invest time and money in asylum seekers and refugees. A large group of 58,8 per cent of the responders answered neutrally. This might implicate a limit to the costs and time companies are willing to invest, supported by 11,8% of the respondents who strongly disagree. Willingness declines when costs and time increase. It would be interesting to quantify this in a future survey. Overall, the sole fact of having to invest does not seem to influence the decision to hire asylum seekers and refugees; possibly, entrepreneurs are aware of the necessity of investing before making a profit.

7 CONCLUSIONS

In this final chapter, we present the answers to our main research question;

“What are the decisive factors that determine successful accommodation of port work by asylum seekers and refugees?”

To get a more comprehensive and complete picture of the decisive factors arising from the answer to the primary research question, in this chapter, we also answer the sub-research questions;

1. “What is the importance of human capital in ports? Where does the mismatch between demand and supply of port employment exist, specifically in the port of Rotterdam?”
2. “What is the role of port authorities in the human capital development of ports in general and more specifically towards the mismatch between demand and supply of port employment?”
3. “What is the companies’ role in providing resources, assistance and aid for refugee workers?”
4. “What was the total asylum influx in Rotterdam, and to what extent did this contribute to fulfilling vacancies in the port community?”

Based on the literature research and the survey conducted, we identify issues that we cannot answer within the scope of this study and the limitations of our research.

7.1 KEY FINDINGS

7.1.1 DECISIVE FACTORS FOR SUCCESSFUL LABOUR MARKET INTEGRATION OF ASYLUM SEEKERS AND REFUGEES IN THE PORT OF ROTTERDAM.

Active Labour Market Policies by national and local governments and investments in (tailor-made) education and training at an early stage are useful.

When necessary, acquiring digital skills should receive explicit attention.

Language proficiency, more specific knowledge of the English language, is necessary at an early stage, for many vacancies, knowledge of the Dutch language can be acquired later.

Public-private cooperation in which the Port of Rotterdam Authority should play an active and steering role in strengthening the port exosystem and port innovation is essential.

Attention must be paid to port employers' knowledge about finding and deploying this group of potential employees as well as about the related laws and regulations, both in the field of rights to work and in the field of rights and obligations of employers and employees when deploying asylum seekers and refugees.

Transparency and uniformity of these rules is necessary to maintain support among employers for labour deployment.

7.1.2 THE IMPORTANCE OF HUMAN CAPITAL IN PORTS AND THE MISMATCH BETWEEN DEMAND AND SUPPLY OF PORT EMPLOYMENT IN THE PORT OF ROTTERDAM

Human capital is crucial for a thriving port where ageing and attractiveness from other sectors create shortages, and automation increases the need for well-educated employees.

In the region of Rotterdam, a significant group of people, including asylum-seekers and (former) refugees, stand on the sidelines regularly because of complicated regulations and the business community's unfamiliarity with this group.

Authorities should take the lead in bringing together labour demand from the market and supply from asylum seekers and refugees. Port entrepreneurs are almost unanimous in their opinion that, despite many well-intentioned initiatives, they do not know where to do business.

Active operational and financial support emphasising language education and training remains necessary and produces demonstrable positive effects within a few years after the asylum seeker's arrival. Harmonisation and stabilisation of laws and regulations within the European Union accelerate the entry of refugees into paid employment and lower employers' threshold.

The role of port authorities in the human capital development of ports in general and, more specifically towards the mismatch between demand and supply of port employment

Port Authorities play a role in allocating human capital mismatches, port promotion and reporting to the local or national government. In the labour market port authorities should play an proactive entrepreneurial role in finding solutions for the scarcity of human capital.

The interview analyses show a minority of port companies believe hiring refugees benefits the company. This leads to the conclusion that public information and supportive policies remain necessary, while financial and operational support policies that tip the balance for port entrepreneurs are desirable.

The port authority, as representative of the entire port, should actively lobby the local and national authorities to remove administrative barriers and harmonise laws and regulations, not only locally but also between European union member states.

7.1.3 THE COMPANIES’ ROLE IN PROVIDING RESOURCES FOR REFUGEE WORKERS

Only a small proportion of the respondents would hire refugees irrespective of social responsibility, demonstrating that companies are not convinced of profitability.

Table 13- Companies' willingness

Considers hiring asylum seekers and refugees from a purely economic perspective	11,70%
Considers hiring asylum seekers and refugees for management positions	41,20%
Fully understands applicable rules and regulations	35,30%

Most companies are willing to support refugees with education, training and internships. The responses in the survey indicate that lower-ranking positions in the company are considered the most appropriate. Companies require more information on their rights and obligations, with many not being aware of rules and regulations in this perspective. There is a need for support by authorities in assessing foreign certificates and testimonials.

Most companies require basic Dutch language skills, and it seems imperative for the Government or port authorities to take the lead here as this factor might delay the refugees' entry into the labour market. Companies are willing to invest in asylum-seekers and refugees, but the government needs to create the right conditions.

Statistical and demographic data indicates that the influx of asylum seekers and refugees in the Netherlands will be a fluctuating but continuous phenomenon in the coming decades.

Within companies, a policy taking technical innovations into account and focusing on people will be crucial to successfully including refugees on the work floor in the port of Rotterdam.

Intensive cooperation between businesses, training institutes and government in the port, whereby the parties reinforce and complement each other, is a driver of success. The knowledge gained during years of labour migration by the businesses in the port can partly be applied to refugees.

7.1.4 TOTAL ASYLUM INFLUX CONTRIBUTION TO FULFILLING VACANCIES IN PORT

More than 4,3 Million refugees have been granted asylum since 1960, net migration values fluctuate as refugees, and other migrants enter and leave the country.

Since the Maastricht Treaty implementation in 1992, EU citizens have had the right to work in the Netherlands. Traditional emigrant countries like the countries Portugal and Spain (1986), most Eastern European states (2004 and 2007) and Croatia (2013) do not appear in the asylum statistics since their accession, after which the group of asylum seekers consists almost exclusively of non-western migrants. A total of 743,409 refugees were granted asylum from 2013 UTAI 2020 (WorldBank, 2022).

Table 14 - Potential workforce

Granted asylum 2013-2020	Share of labour force Employed in port	Labour force Potential	Labour force Unemployed	Labour force Available
743,409	1,90%	14,125	1,963	12,162

Assuming no change in the port's attractiveness and continued demand from competitive sectors, asylum seekers and refugees who entered the Netherlands during these seven years could provide 12,162 new workers. Allowing a higher, slowly declining unemployment rate among refugees (Eurostat, 2022).

These calculations need to be further elaborated; a follow-up study with a large-scale survey among port employees and companies about the employees' backgrounds could play a role in this.

7.2 RESEARCH LIMITATIONS AND FOLLOW-UP RESEARCH

A literature study and descriptive statistics have limitations; the survey conducted among a group of leading port employees should be conducted on a larger scale to assess its validity properly. The labour market details of the Netherlands are a limited scope.

A closer view of the differences and similarities between Rotterdam and other global ports beyond this study's scope could lead to new insights. A 5-point Likert scale offers respondents an easy escape if they find the question too complicated or want to give a politically correct answer. This is a limitation of the study; in a successive study, the answers should be explained in more detail through open-ended questions or an interview.

The characteristics of the refugees in this research can only be limited to some internationally measurable units such as illiteracy and education level. It would be interesting to follow large numbers of asylum seekers from registration until well after obtaining their residence permits or even naturalisation to get a good idea of which factors have the most influence on a successful career in Rotterdam port in the long run.

BIBLIOGRAPHY

Acharya, A., Lieber, R., Seem, L., & Welchman, T. (2021, March 1). How to identify the right 'spans of control' for your organisation. McKinsey & Company. Retrieved September 6, 2022, from <https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/how-to-identify-the-right-spans-of-control-for-your-organization>

Adema, W., Clarke, C., Frey, V. (2016) 'Paid parental leave and other supports for parents with young children: The United States in international comparison', *International Social Security Review*, Vol. 69/2, pp. 29-51.

Amisi, B., Bond, P., Cele, N., Ngwane, T. (2011). *Xenophobia and Civil Society: Durban's Structured Social Divisions*. *Politikon: South African Journal of Political Studies*. 38(1): 59-81.

Bach, S. et al. (2017) 'Refugee integration: A worthwhile investment' *DIW Economic Bulletin*, ISSN 2192-7219, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin, Vol. 7, Iss. 3/4, pp. 33-43.

Biehler, N., Koch, A., Meier, A. (2021) *Risks and side-effects of German and European return policy: Foreign Policy, Security and Development Trade-offs*. (SWP Research Paper, 12/2021). Berlin: Stiftung Wissenschaft und Politik - SWP- Deutsches Institut für Internationale Politik und Sicherheit. <https://doi.org/10.18449/2021RP12>

Carpenter, C. (2022). *Ukraine's rules keeping men in the country to fight Russia will set back its war effort*. [online] *Business Insider*. Available at: <https://www.businessinsider.com/ukrainian-rules-keeping-men-in-country-undermine-war-against-russia-2022-8?international=true&r=US&IR=T> [Accessed 10 Aug. 2022].

CBS (2021) 'Income, consumption, wealth of households: key figures; National Accounts' , Available at: <https://opendata.cbs.nl/statline/#/CBS/en/dataset/84102ENG/table> (Accessed: 25 June 2022).

CBS(2022) 'How many asylum seekers enter the Netherlands?' , Available at: <https://www.cbs.nl/nl-nl/dossier/dossier-asiel-migratie-en-integratie/hoeveel-asielzoekers-komen-naar-nederland> (Accessed: 27 July 2022).

Cho, R. (2019) 'How Climate Change Impact the Economy.' , Available at: <https://news.climate.columbia.edu/2019/06/20/climate-change-economy-impacts/> (Accessed: 30 August 2022).

Christodoulou-Varotsi, I., Pentsov, D.A. and Springerlink (Online Service (2008). *Maritime Work Law Fundamentals: Responsible Shipowners, Reliable Seafarers*. Berlin, Heidelberg: Springer Berlin Heidelberg. (Christodoulou-Varotsi, Pentsov and Springerlink (Online Service, 2008)

Coeck, C., Notteboom, T., Verbeke, A., & Winkelmanns, W. (1996). A resource-based perspective on strategic port planning. In Smits, & Thues (Eds.), *Proceedings of the 11th harbour Congress* (pp. 29–41). The Royal Flemish Society of Engineers, Antwerp.

Compas (2016) 'Hiring refugees - What are the opportunities and challenges for employers?' , Available at:https://ec.europa.eu/migrant-integration/library-document/hiring-refugees-what-are-opportunities-and-challenges-employers_en (Accessed: 04 July 2022).

Dekker,Zandvliet,Vleeschhouwer (2022) 'ARBEIDSMARKTONDERZOEK HIC 2021' , Available at:<https://www.portofrotterdam.com/sites/default/files/2021-05/arbeidsmarktonderzoek-hic-rotterdam-2021.pdf> (Accessed: 30 July 2022).

De Valk, H., Acostamadiedo, E., Guan, Q., Melde, S. (2022).INTRODUCTION TO MIGRATION STUDIES : an interactive guide to the literatures. (2022). S.L.: Springer.

Depamphilis, D.M. (2010). Mergers, acquisitions, and other restructuring activities : an integrated approach to process, tools, cases, and solutions. Amsterdam, The Netherlands ; Burlington, Mass.: Academic Press.

Docquier et al. (2018) 'Labor Market Effects of Demographic Shifts and Migration in OECD Countries.' , Policy Research Working Paper;No. 8676. World Bank, Washington, DC. © World Bank. Available at : <https://openknowledge.worldbank.org/handle/10986/31078> License: CC BY 3.0 IGO."

Doornbos, N. ,Groenendijk (2001) Uitkomsten van asielprocedures: een cohortenonderzoek, Nederlands Juristenblad 76 (6), pp. 145-253

DUR,R.A.J. (1999) Mismatch between unemployment and vacancies in the Dutch labour market, Applied Economics, 31:2, 237-244, DOI: 10.1080/000368499324462

Esser, A., Sys, C., Vanelslander, T., & Verhetsel, A. (2020). The labour market for the port of the future. A case study for the port of Antwerp. Case Studies on Transport Policy, Volume 8, Issue 2,2020,Pages 349-360,ISSN 2213-624X

ESPAS(2018) "Global Trends to 2030: The Future of Migration and Integration" Available at https://espas.secure.europarl.europa.eu/orbis/sites/default/files/generated/document/en/Ideas%20Paper%20Future%20Migration%20Integration_V04.pdf (Accesses: 28 September 2022).

EUROSTAT(2022) 'euroindicators' , Available at:<https://ec.europa.eu/eurostat/documents/2995521/14497745/2-22042022-BP-EN.pdf/90896015-2ac1-081a-2eef-ad8d5f2c0da1> (Accessed: 21 August 2022).

Freeman,R.B. 2006. "Labor market imbalances: shortages, or surpluses, or fish stories?," Conference Series ; (Proceedings), Federal Reserve Bank of Boston, vol. 51.

Gemeente Amsterdam (1928). Inventarissen. (online) Available at: <https://archieff.amsterdam/inventarissen/details/30190> (Accessed 23 Aug. 2022).

Gialis S, Leontidou L. 'Antinomies of flexibilization and atypical employment in Mediterranean Europe: Greek, Italian and Spanish regions during the crisis' , European Urban and Regional Studies. 2016;23(4):716-733. doi:10.1177/0969776414538983

Ham, Else (2008) 'Tweede generatie immigranten en hun herkomstland' Den Haag, Thesis: Radboud Universiteit Nijmegen. Available at :

https://theses.ubn.ru.nl/bitstream/handle/123456789/3164/Ham%2C_Else_1.pdf?sequence=1,
Accessed 31-8-2022

Hartog, J., Theeuwes, J. 'Post-war unemployment in the Netherlands', *European Journal of Political Economy*, Volume 9, Issue 1, 1993, Pages 73-112, ISSN 0176-2680, [https://doi.org/10.1016/0176-2680\(93\)90029-T](https://doi.org/10.1016/0176-2680(93)90029-T). (<https://www.sciencedirect.com/science/article/pii/017626809390029T>)

ILO (2006) *Maritime Labour Convention, 2006*. Available at: <https://www.ilo.org/global/standards/maritime-labour-convention/lang--en/index.htm> (Accessed: 30 september 2022).

ILO (2013) 'Maldives ratifies the eight ILO fundamental Conventions', Available at: https://www.ilo.org/global/standards/WCMS_201895/lang--en/index.htm (Accessed: 21 August 2022).

Jansen, M. (2019) 'De digitale haven komt eraan', *SWZ Maritime*, pp. 22-25.

Jansen, M., Vermeulen, S & van Haaren, J (2020), *Rotterdam, thuishaven voor talent*. Rotterdam: UPT Erasmus.

Juhel, M. Globalisation, Privatisation and Restructuring of Ports. *Marit Econ Logist* **3**, 139–174 (2001). <https://doi-org.eur.idm.oclc.org/10.1057/palgrave.ijme.9100012>

Korbee, L. (2021). The effect of immigration on the house prices in the Netherlands.

Kromhout, Wubs, Beenhakkers (2008) 'Illegaal verblijf in Nederland', Available at: <http://hdl.handle.net/20.500.12832/65> (Accessed: 09 August 2022).

Kuipers, B., Larissa, van der L., Wouter, J., Martijn, S., Maurice, J. and Jeroen, van H. (2018). *HET ROTTERDAM EFFECT*. Rotterdam: Erasmus Centre for Urban, Port and Transport Economics (Erasmus UPT), pp.4–38.

Kyurova, Vyara & Yaneva, Dilyana. (2017). RESEARCH ON THE IMPACT OF THE CORPORATE IMAGE ON THE COMPETITIVENESS OF INTERIOR DESIGN ENTERPRISES. *CBU International Conference Proceedings*. 5. 495. 10.12955/cbup.v5.973.

van der Lugt, L., de Langen, P.W. and Hagdorn, L. (2016). Strategic beliefs of port authorities. *Transport Reviews*, 37(4), pp.412–441.

Lee, R. (1998). The socio-economic and demographic characteristics of port cities: A typology for comparative analysis? *Urban History*, 25(2), 147-172. doi:10.1017/S096392680000078X

Linz, K & Stula, S (2010) 'Demographic change in Europe -An Overview. Frankfurt am Main: Federal Ministry for Family Affairs', available at: <http://www.sociopolitical->

observatory.eu/uploads/tx_aebgppublications/Working_Paper_no_4_Observatory_Demographic_change_in_Europe_Overview.pdf (Accessed: 8 August 2022)

Martinez-de-Ibarreta, S. (2021) 'Education and skill mismatches among immigrants: The impact of host language proficiency', Available at: <https://pdf.sciencedirectassets.com/271751/> (Accessed: 27 August 2022).

Nargund G. Declining birth rate in Developed Countries: A radical policy re-think is required. *Facts Views Vis Obgyn.* 2009;1(3):191-3. PMID: 25489464; PMCID: PMC4255510.

NL Times. (2022). Companies at the Port of Rotterdam lose millions due to staff shortages. (online) Available at: <https://nltimes.nl/2022/06/19/companies-port-rotterdam-lose-millions-due-staff-shortages> (Accessed 28 Aug. 2022)

Norman, G. "Likert scales, levels of measurement and the "laws" of statistics." *Advances in health sciences education* 15.5 (2010): 625-632.

Oberg, J. (2021) 'Global Capital Flows in the Postpandemic World.', Available at: <https://www.bcg.com/publications/2021/global-capital-post-pandemic> (Accessed: 30 August 2022)

Office of Population Research (1984) 'Population Index, "50:30087-50:30116." *Population654 Index*, vol. 50, no. 3, 1984, pp. 471–76. JSTOR' Available at: <http://www.jstor.org/stable/2737075> (Accessed 21 Aug. 2022).

Phoenix (2015) 'Sommer-Presskonferenz der Kanzlerin zu aktuellen Themen am 31.08.2015' Available at: https://www.youtube.com/watch?v=5eXc5Sc_rnY (Accessed: 30 September 2022)

Portes, J. (2019) 'The Economics of Migration', Available at: <https://journals-sagepub-com.eur.idm.oclc.org/doi/10.1177/1536504219854712> (Accessed: 27 August 2022).

PORTUS (2021) 'Nurturing Talent in the Port City of Rotterdam', Available at: <https://portusonline.org/nurturing-talent-in-the-port-city-of-rotterdam/> (Accessed: 02 July 2022).

Port of Rotterdam. (2022). WPCAP-klimaatprogramma. (online) Available at: <https://www.portofrotterdam.com/nl/haven-van-de-toekomst/energietransitie/wpcap-klimaatprogramma> (Accessed 25 Aug. 2022).

Rotmans, R. (2020). The strategic challenge of human-centred innovation in ports: Studies into how strategic human resource practices contribute to enhancing innovation outcomes in organization and regions.

Schyns (2016) 'Choosing at the checkout. An exploration of political consumerism in the Netherlands', Available at: <https://www.researchgate.net/publication/304525423> (Accessed: 31 July 2022)

Sheikh, Mehak and Anderson, Joel R.. (2018). Acculturation patterns and education of refugees and asylum seekers: A systematic literature review. *Learning and Individual Differences.* 67, pp. 22 - 32. <https://doi.org/10.1016/j.lindif.2018.07.003>. (2022)

Staring, A. (2022) 'Werken in de marge, illegaal verblijvende jongeren in Nederland' , Available at:<https://www.cbs.nl/nl-nl/dossier/dossier-asiel-migratie-en-integratie/hoeveel-asielzoekers-komen-naar-nederland-> (Accessed: 27 July 2022).

Souto-Otero, M., Villalba-Garcia, E. Migration and validation of non-formal and informal learning in Europe: Inclusion, exclusion or polarisation in the recognition of skills?. *Int Rev Educ* 61, 585–607 (2015). <https://doi.org/10.1007/s11159-015-9516-7>

Sultana, R.G. The labour market integration of migrants and refugees: career guidance and the newly arrived. *Int J Educ Vocat Guidance* 22, 491–510 (2022). <https://doi.org/10.1007/s10775-022-09529-z>

Taherdoost, Hamed, What Is the Best Response Scale for Survey and Questionnaire Design; Review of Different Lengths of Rating Scale / Attitude Scale / Likert Scale (March 29, 2019)., *International Journal of Academic Research in Management*, Vol. 8, No. 1, 2019, Page: 1-10., Available at SSRN: <https://ssrn.com/abstract=3588604>

The Guardian (2011) 'UK Wage gap widens' , Available at:<https://www.theguardian.com/news/datablog/2012/nov/09/wage-gap-rich-poor-widens-25-years-data> (Accessed: 22 August 2022).

Toppan Digital Language. (2015). The Economic Cost of a Lack of Language Skills. (online) Available at: <https://toppandigital.com/translation-blog/the-economic-cost-of-a-lack-of-language-skills/> (Accessed 29 Aug. 2022).

UNCTAD (2021) 'Training upskills for management professionals' , Available at: <https://unctad.org/news/training-upskills-port-management-professionals> (Accessed: 02 July 2022).

UNHCR(2022) 'AFGHANISTAN HUMANITARIAN CRISIS' , Available at:<https://www.unrefugees.org/emergencies/afghanistan/> (Accessed: 24 July 2022).

Van de Beek, J, et al. (2021), *Grenzeloze Verzorgingsstaat*. Amsterdam: Renaissance Instituut.

van der Horst, M., Kort, M., Kuipers, B. and Geerlings, H. (2019). Coordination problems in container barging in the port of Rotterdam: an institutional analysis. *Transportation Planning and Technology*, 42(2), pp.187–199. doi:10.1080/03081060.2019.1565164.

van der Lugt, L.M., de Langen, P.W., Hagdrón, L. (2017) Strategic beliefs of port authorities, *Transport Reviews*, 37:4, 412-441, DOI: 10.1080/01441647.2016.1245685

van der Lugt, L., Dooms, M., & Parola, F. (2013). Strategy making by hybrid organizations: The case of the port authority. *Research in Transportation Business & Management*, 8, 103–113.

van Hout, M., Leerkes, A. (2019) Dealing with (non-)deportability: A comparative policy analysis of the post-entry migration enforcement regimes of Western European countries.. Rotterdam: UPT Erasmus.

van Vliet O, Koster F. Europeanization and the political economy of active labour market policies. *European Union Politics*. 2011;12(2):217-239. doi:10.1177/1465116511398740

- van Hout, M., Leerkes, A. (2019) Hoe verhouden de Nederlandse terugkeercijfers zich tot die elders in Europa? - Leg mij nou eens uit - VreemdelingenVisie. Available at: <https://www.vreemdelingenvisie.nl/vreemdelingenvisie/2019/09/leg-mij-uit> (Accessed 10 Aug. 2022).
- Verhoeven, P. (2010). A review of port authority functions: Towards a renaissance? *Maritime Policy & Management*, 37(3), 247–270.
- Verweij, A. (1900) 'Arbeidspositie naar migratieachtergrond 2003-2017', Available at: <https://www.cbs.nl/nl-nl/achtergrond/2019/08/arbeidspositie-naar-migratieachtergrond-2003-2017#:~:text=Voor%20de%20Surinaamse%20eerste%20generatie> (Accessed: 27 August 2022).
- Wekker, G. *White Innocence: Paradoxes of Colonialism and Race*, New York, USA: Duke University Press, 2016. <https://doi.org/10.1515/9780822374565>
- Vollset, Stein Emil, Goren, Emil, Yuan, Chun-Wei, Cao, Jackie, Smith, Amanda & Hsiao, Thomas (2020), Fertility, mortality, migration, and population scenarios for 195 countries and territories from 2017 to 2100: a forecasting analysis for the Global Burden of Disease Study. *The Lancet*: Elsevier.
- Vriend, J.J. (1961). *50 Jaar woningbouw Philips : bouwen als sociale daad*. 1st ed. Eindhoven: Philips, pp.110–121.
- Vukojevic, J. (2021) 'Social networks are key to Refugee Integration', Available at: <https://cpj.ca/social-networks-are-key-to-refugee-integration/> (Accessed: 29 August 2022).
- Wermelink, Y (2012) 'Increasing Workforce Productivity of Employees with a Distance to the Labor Market – The Changing Rules and Regulations' (utwente.nl) (Accessed 15-8-2022)
- Wido Geis-Thöne (2020) 'Integration: Immer mehr Geflüchtete haben einen Job.', Available at: <https://www.iwkoeln.de/presse/pressemitteilungen/wido-geis-thoene-immer-mehr-gefluechtete-haben-einen-job.html> (Accessed: 17 July 2022).
- Wortelboer, P. -Van Donselaar & Kolkman, J. (2010) Societal costs and benefits of cooperation between port authorities, *Maritime Policy & Management*, 37:3, 271-284, DOI: 10.1080/03088831003700660
- Zandvliet, K. & de Rooij-van Leeuwen, M. (2019) 'Arbeidsmarktonderzoek haven- en industriecomplex Rotterdam 2016-2017', Available at: <S1179-Arbeidsmarktonderzoek-Haven--en-Industriecomplex-Rotterdam-2016-2017.pdf> (Accessed: 21 August 2022).
- Zovange Kone, Isabel Ruiz, Carlos Vargas-Silva (2019) 'Refugees and the UK Labour Market' Oxford: Compas.

APPENDIX

QUESTIONARY GOOGLE-FORMS

Likert scale multiple-choice questions, possible answers;

- 1 Strongly agree
- 2 Agree
- 3 Undecided
- 4 Disagree
- 5 Strongly disagree

- 1 Hiring refugees or asylum seekers in our company would be good for business from a financial point of view.
- 2 Disregarding social responsibility, I would be willing to hire refugees and asylum seekers in our company.
- 3 I would be willing to support refugees and asylum seekers through company training and internships.
- 4 I would be willing to hire refugees and asylum seekers in middle and senior management positions.
- 5 I'm fully aware of the rules and regulations involved in hiring asylum seekers and refugees in the Netherlands.
- 6 It is difficult for me to assess the value of foreign certificates and testimonials in the Dutch/Rotterdam context.
- 7 A Dutch language proficiency A1 (basics) is essential for my willingness to hire asylum seekers and refugees ,a reasonable command of English is insufficient.
- 8 I know which organization I can approach for hiring asylum seekers and refugees.
- 9 Media coverage of asylum seeker and refugee inflows enhance my willingness to hire asylum seekers and refugees.
- 10 Cost and time involved to improve language proficiency and work ethics reduces our willingness to hire asylum seekers and refugees.