The influence of immigrant integration policies on the economy of destination countries: A quantitative data analysis on the impact of the level of favourability of immigrant integration policies on employment, wealth, and public finances.

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The influence of immigrant integration policies on the economy of destination countries

A quantitative data analysis on the impact of the level of favourability of immigrant integration policies on employment, wealth, and public finances.

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Abstract

This thesis analyses the impact of different levels of favourability of immigrant integration policies on immigrant-receiving economies in OECD countries. Specifically, the effects brought to attention are employment, wealth, and public finances. Existing literature predominantly focusses on the impact of migration in general on destination economies and differ in opinion as to whether the relationship is positive or negative. Some literature already deepens the investigation into that relationship by including the aspect of immigrant integration policy, to which this thesis contributes by doing a quantitative data analysis. The impact of integration policies is assessed using three different models. The first model is a one-way multivariate analysis of variance. To the second and third model covariates have been added, which are respectively the number of recognized and rejected asylum applications. The analysis shows that states with higher levels of immigrant integration policy are better at ensuring positive relative native employment than states with lower levels of policy. The relationship between higher levels of integration policy and higher individual wealth is partially confirmed. The relationship between levels of integration policy and public finances needs to be researched further to draw conclusions about this.

Key terms: immigrant integration policy, migration, destination country, economy, employment, wealth, public finances.

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1. Introduction

Migration has become an inherent part of the order of the day. According to data by the United Nations High Commission for Refugees, there were 70.8 million forcibly displaced people worldwide in 2018, of which 13.6 million were newly displaced (UNHCR, 2018). In 2018, 3.5 million people applied for asylum (UNHCR, 2018). Since the European refugee crisis of 2015 (Abassi et al., 2015) the number of asylum applicants worldwide has varied between 2.7 and 4.6 million per year (UNHCR, 2022). These numbers are far higher than before 2015. The arrival of large groups of migrants to destination countries changes those' ethnic compositions, which in turn strengthen the beliefs some natives hold that different ethnicities threaten the social, political, and economic order of a country (Kologeraki, 2012). As long as immigration is on the rise, the impact thereof on the receiving country's economy will remain an important political issue in the centre of the public debate (Cohen-Goldner & Paserman, 2011).

The impact of different ethnicities in a country following from migration on the economy of destination countries has been researched to a great extent. The economic aspects that are affected by migration that are predominantly highlighted in research are employment, wealth, and public finances. Conclusions on the relationship differ between authors, where some claim that migration will positively affect the economy of destination countries (e.g., Constant, 2014; D'Amuri & Peri, 2014), some notice no specific impact (e.g., Longhi et al., 2005), and others see a negative relationship (e.g., Gang & Rivera-Batiz, 1994).

One of the three dimensions of policy that focusses on the integration of immigrants is the socio-economic dimension (Penninx and Garcés-Mascareñas, 2016). Kancs and Lecca (2018) make the connection between the effects of migration on the economy and look at that dimension to integrate immigrant integration policy. According to them, integration policies can enhance positive economic effects by increasing employment and through fiscal benefits (Kancs & Lecca, 2018). Other articles also discuss the relationship between aspects of integration policy and economic outcomes, although they do not always link the aspects to actual integration policy (e.g., D'Amuri & Peri, 2014; De Vroome & Van Tubergen, 2010; Entzinger & Biezeveld, 2003; Longhi et al., 2005). Therefore, the role of immigrant integration policy in this research field remains under-researched, making it interesting to further investigate the relationship (Longhi et al., 2005). This thesis aims to estimate the impact of different levels of integration policy of 33 Organisation for Economic Co-operation

and Development (OECD) countries on economic aspects of destination countries. Hereby, the focus is specifically on employment, wealth, and public finances. From this follows the research question:

To what extent does immigrant integration policy influence the economy of destination countries?

The academic contribution of this thesis lies in the attempt to create an overarching framework that focuses on economic aspects that other academics researched separately, as well as in the type of research. The hypothesized relationships between immigrant integration policy and the economy of the destination country are tested by using multiple models created through a one-way multivariate analysis of (co)variance. This is valuable, because research into this relationship is limited, and integration policy has not been considered enough in general theories on the impact of migration on the economy of destination countries. The research topic is also highly societally relevant, because migration is not likely to diminish anytime soon, as there are still a lot of places in the world plagued by (political) unrest and unsafety, as well as the emergence of environmental migration (McLeman & Gemenne, 2018).

The thesis is structured as follows. The next chapter will introduce the on the impact of migration on economies of destination countries and immigrant integration policy. It also discusses the hypotheses that have been formulated based on existing theories. Chapter 3 discusses the scope of the analysis and how it is executed, which dataset is used and how the variables are operationalized. The analysis consists of three models. The first model is conducted by a one-way multivariate analysis of variances, and the second and third model are based on a one-way multivariate analysis of covariances. Chapter 4 discusses the results of the statistical tests. These results and their implications are discussed in more detail in chapter 5, as well as the limitations. Chapter 6 concludes the thesis with the main takeaways from the thesis and recommendations for further research.

2. Theoretical background

Migration refers to the movement of persons from one geographic area to another, crossing political and administrative boundaries, with the intention of settling in a different location than their place of origin (Bauer et al., 2004). There are different types of motivation for migration. The first is economic or labour migration, which occurs when individuals move to a destination country that offers better working conditions and living standards compared to their home country (Noja et al., 2018). Another form of migration is driven by the search for international protection, resulting from factors such as poverty, political instability, and armed conflicts in the country of origin (Noja et al., 2018). This is known as humanitarian migration. It is important to note that while migration may be seen as a promise or opportunity by some, it can be perceived as a threat by others (Longhi et al., 2005).

Massive migration flows are often perceived in the public sphere as a risk for the economy of the destination country. This appears for example from research into the attitudes of natives towards immigrants, which shows that natives tend to fear that status holders will take their jobs (DeVoretz, 2006). However, research is often focussed on the humanitarian aspect of migration, whereas migration might also provide challenges and opportunities for receiving countries (Kancs & Lecca, 2018). Research in the latter field could contribute to confirming or denying the perceived threats. The most important factors through which the impact of migration is measured throughout earlier literature are employment, wealth, and public finances. This thesis explores that side of the impact of migration and immigrant integration.

2.1 Economic outcomes

2.1.1 Employment

A crucial element in determining the impact of migration on employment in the destination country is the notion of substitutability versus complementarity. This principle assumes that there are two possibilities regarding the position of migrants in the destination labour market as opposed to native-born citizens. First, a migrant could either be a substitute for the native employee, which means that they have the same set of skills making the migrant capable of taking the native's job (Viseth, 2020). The other possibility is that they are complementary to each other, resulting in the migrant being able to get a job without this being at the expense of native employees, because their skills do not overlap with each other (Viseth, 2020). Whereas

literature agrees that complementarity does not create an issue for employment when there is a short in labour supply to meet labour demand (Münz et al., 2006), substitutability is often considered the culprit of migration.

Substitutability occurs most often in the low-skill sector of the labour market. That is in part because a large share of migrants are humanitarian migrants (UNHCR, 2022), which means that they had to flee their country involuntarily and suddenly, causing them to have been unable to prepare their departure. Lacking language skills and documents to showcase their academic and professional abilities, and additionally possibly having suffered a trauma, frequently leads to complications entering the labour market or working below the level of the migrant's competence (D'Amuri & Peri, 2014; Egner, 2006; Sangalang et al., 2019). A second reason for the share of migrants working in the low-skilled segment is that they have a low level of education, which leads to a better fit with manual-intensive jobs rather than communication and interactive jobs (D'Amuri & Peri, 2014). That can create competition, which could come across as a threat to native citizens (Borjas, 2003). However, substitutability in the low-skilled sector is not necessarily a reason for concern because it can create a push factor for native workers. When immigrants work in labour-intensive segments of the labour market, it pushes native workers to broaden their horizons and take on more complex jobs, a phenomenon also known as positive job reallocation (Foged & Peri, 2013; D'Amuri & Peri, 2014). According to D'Amuri and Peri's research (2014), who researched the effect in fifteen Western European countries, when the proportion of immigrants in a particular skill group doubles, it leads to a 5% to 6% increase in the relative specialization of natives in complex skills. This suggests that regardless of substitutability, immigrants do not impact the employment rates among natives in the low-skilled sector, and in fact, employment rates could increase.

In the 21st century most Western countries do not have full employment, resulting in a surplus in labour demand (Constant, 2014). This brings along opportunities for migrants to enter the labour market in three different ways, without compromising native employment rates. The first reason relates to the fact that a share of the job openings is present due to demographic ageing (Constant, 2014), which allows migrants to enter the labour market in a direct sense. The second reason concerns the fact that native citizens are pickier in the types of vacancies they want to fulfil. Migrants are eager to start working and are willing to work in the low-skilled sector even if they are overqualified (Constant, 2014). The natives leave a gap in this sector because they rather are unemployed than work in the low-skilled sector (Constant,

2014) This, to a great extent, has to do with the welfare systems of the country. When the welfare system is strongly organized, it is more tempting and maybe even more rewarding to stay unemployed (Constant, 2014). Another reason for the unpopularity of jobs in the low-skilled area, is that native employees claim that they miss opportunity for career promotions in the future (OECD, 2014). Lastly, the provision of migrant labour in the low-skilled sector is beneficial for employers because it is cheaper labour, leading to employers to increase labour demand (Ortega, 2000; Constant, 2014). The labour market can thus also be enlarged because it is more beneficial to both parties.

2.1.2 Individual wealth

The impact of migration on the aggregate individual wealth of a destination country consists of multiple facets, namely the wealth immigrants will be able to achieve once they live in the destination country, but also the extent to which their arrival influences the wealth of natives. In relation to the first facet, data from household surveys show that immigrants in Europe can earn approximately 30% lower wages than natives and hold around 60% less net wealth, with only around 30% of the differences explained by demographic factors (Dossche et al., 2022). Regarding the latter element of individual wealth, research conducted in the United States suggests that there is a positive causal relationship between the percentage of immigrants in an area and the living standards of native-born citizens (Zhu & Pulleyblank, 2020). Gang and Rivera-Batiz (1994) argue, however, that the impact of immigrants on the earnings of native-born workers is dependent on whether they are substitutes or complements in the production process. These effects vary depending on their respective skills and characteristics. Noja et al. (2018) also address the role of skills. When immigrants have different educational levels than natives, the overall education level of the labour force of the destination country changes (Noja et al., 2018). That causes an imbalance between labour demand and supply at the existing economic balance regarding wages and output levels (Noja et al., 2018). Restoring the equilibrium would involve temporary fluctuations in age and output levels based on educational attainment, which may or may not lead to further long-term changes (Noja et al., 2018). The theory emphasizes that (labour) migration does not have substantial negative effects on wages, especially in the long run, and even when educational levels improve (Noja et al., 2018).

That migration flows would put pressure on native wages, is a common fear for citizens (Longhi et al., 2005). This is especially the case for natives for which migrants could be

substitutes who could take over their jobs against lower wages (Longhi et al., 2005). However, a meta-analytic assessment of 18 papers pointed out that this is not a realistic fear. The effect of migration on wages if negative is only very small, to such an extent that it is negligible, and sometimes the effect is even positive (Longhi et al., 2005). The direction and size of the effect might have to do with the size of destination areas, as the negative impact is deemed larger in European Union countries than in the United States (Longhi et al., 2005).

Lastly, revisiting the notion of positive reallocation cited in the section on employment, reallocation often also leads to an increase in the native's wage. This appears from the statistics provided by D'Amuri and Peri (2014), which show that if the share of the total population that has been born in a foreign country is doubled, native monthly wages increase by 0.7%.

2.1.3 Public finances

Public finance relates to the expenditure and income governments experience from migration (D'Albis et al., 2019). The topic of public finances is less represented in existing literature but fits well in the complete picture as it is an extent of employment and wages. Constant (2014), the Organisation for Economic Co-operation and Development (2014), and Simon (1996), argue that migrants who have a job will contribute more to public finances in the form of taxes than they will profit from it through social benefits. Recent immigrants have the potential to enrich the native population through the public budget, as they are typically of working age and do not rely much on social security benefits and medical services (D'Albis et al., 2019; Gustafsson & Österberg, 2000). However, if they do not find employment, the situation might become the opposite.

Research into the Organisation for Economic Co-operation and Development (OECD) countries shows that the impact of migration waves on the fiscal situation of the receiving country has been close to zero, with a few outliers of around 0.5% of the gross domestic product, both negative and positive (OECD, 2014).

2.2 Immigrant integration policy

Immigrants applying for asylum in a country face two successive policies of that destination country that are specifically relevant to them. Initially, this is the policy that the receiving country enforces regarding the asylum procedure. This is what in literature is called

immigration policy (e.g., Helbling, 2013; Koopmans & Michalowski, 2017). Immigration policies serve to decide which (groups of) immigrants are legally allowed to enter the state and which ones are required to go back to the region they came from (Helbling, 2013). If immigrants have successfully gone through that procedure, which may differ from country to country, they start facing immigrant policies. These policies describe the entitlements immigrants have and/or can achieve once accepted to the receiving country (Koopmans & Michalowski, 2017). Immigrant policies in turn can be divided into integration (settlement) and naturalization (citizenship) policies (Hammar, 1990). Integration is a contested topic, but Penninx and Garcés-Mascareñas (2016, pp. 13-14) provide an open conceptualization of the term which is 'the process of becoming an accepted part of society'. This creates a focus on the definition of the process instead of the result which ensures that it does not imply a normative suggestion as to how integration should be formulated (Penninx & Garcés-Mascareñas, 2016). Integration policy in turn is a tool to facilitate the smooth running of the process of integration. Naturalisation is necessary for immigrants to get political rights (Helbling, 2013), and might be considered the final step in the process. However, in reality integration and naturalisation are often looked at together under the name of immigrant integration policy. It is interesting to look at these policies to estimate the economic effects on the receiving country, for which it is especially relevant to see the extent to which and the speed at which approved asylum applicants can participate in society.

Integration policy is formulated by the receiving country's government and translates the position of society concerning immigrants into norms and rules on how they are treated, thought about, and interacted with (De Coninck et al., 2021). The policy focuses on immigrants who have applied for and been granted asylum in the receiving country, indicating that they have a legal right to stay there, even though they may not have obtained citizenship of that country yet (Hammar, 1990). The policy is a set of non-discriminatory rules and regulations that applies equally to all immigrants (Beverelli, 2021). According to Beverelli (2021, p. 172), seven elements of the immigrant integration process are relevant for policies: access to nationality; antidiscrimination; education of migrant children; family reunion; labour market mobility; permanent residence; and political participation. Penninx and Garcés-Mascareñas (2016) speak of three dimensions of integration policy labelled the legal-political, socio-economic, and cultural-religious dimensions. These are broader dimensions within which various elements are accommodated, which largely overlap and/or have the same purport as Beverelli's (2021) dimensions. For this thesis, the socio-economic dimension is

specifically relevant because it refers to the social and economic status of migrants, regardless of whether they have been naturalised yet (Penninx, 2019). The dimension for example looks at the equality of access to the labour market and the credentials of migrants compared to natives and how outcomes may differ between these groups (Penninx, 2019).

2.3 Hypotheses

Having analysed what literature discusses regarding the influence of migration on the economy of destination countries, we now zoom in specifically on the relationship between immigrant integration policy and the economy of destination countries. This will lead to the formulation of theoretical expectations that will be tested using a quantitative data analysis further on in the thesis.

2.3.1 Employment

Measuring migrant labour market participation, which trickles into employment, is widely recognized as a good indicator of the success of integration (Entzinger & Biezeveld, 2003). The question arising from this is how immigrant integration policies can contribute to migrants being able to participate, and how the issue of subsidiarity relates to this. Entzinger and Biezeveld (2003) mention the role of education and language skills regarding the first point, labour market participation. This also shows from research into the Dutch case, where refugees often faced limitations to enter the labour market at all or at their educational level, because educational qualifications did not get recognized (De Vroome & Van Tubergen, 2010). This is unfortunate, because if migrants' education levels are recognized, this can be beneficial for both them and the destination society (De Vroome & Van Tubergen, 2010). Recognition of qualifications can for example be facilitated through language lessons specifically applied to the occupation, or through the stimulation of migrants to follow education in the destination country (De Vroome & Van Tubergen, 2010). Assistance programs to help migrants find employment is also considered to likely have a positive impact on migrants' role and experience in the destination economy (De Vroome & Van Tubergen, 2010).

Another important aspect through which labour market participation can be attained is that migrants should have equal access to the labour market as natives. Noja et al. (2018) indeed found that labour market policies and in particular active labour market policies allow labour integration of migrants, which has positive side effects on employment and wealth. D'Amuri

& Peri (2014) find similar results, saying that positive reallocation occurs more often in less-protected labour markets, showing that good access to the labour market causes natives to upgrade their job and create room for immigrants. Angrist and Kugler (2003) also find that when there is low labour market flexibility, the effects of migration could turn around and worsen. Employment protection legislation prevents reallocation, which could be harmful for both parties (D'Amuri & Peri, 2014), showing that an open and equal access is more beneficial.

The importance of integration on labour market outcomes is also shown by Lewin-Epstein et al. (2003) whose research findings suggest that government intervention and targeted policies aimed at immigrant absorption have a substantial impact on immigrants' labour market outcomes.

Combining all these theoretical arguments leads to the following hypothesis.

H1: In states with higher levels of immigrant integration policies, relative native employment rates are more positive than in states with lower levels of immigrant integration policies.

2.3.2 Individual wealth

Wealth is closely linked to labour market participation which goes hand in hand with wages, an important element of wealth (Entzinger & Biezeveld, 2003). Thus, some of the previous arguments also count for the influence of integration on individual wealth. Another important aspect through which integration could increase the average individual wealth of a destination country, is related to education (Entzinger & Biezeveld, 2003). A part of immigrant integration policies focuses on education (Beverelli, 2021). Lewin-Epstein et al. (2003) found that integration was necessary for education to have a positive effect on wages, because then there is made a bigger effort to recognize earlier educational achievements. Integration can thus increase the education level of an immigrant, which has positive effects on their individual wealth.

Other research points out that immigrants lower the wages of natives in the short run, but that this is an effect that will dissolve over time (Cohen-Goldner & Paserman, 2011). However, they claim that if migrants are complementary to native employees, over time they could become assimilated and thus more substitutable, which could eventually lead to a negative

effect on the wages of those natives (Cohen-Goldner & Paserman, 2011). In this regard, integration could be seen as detrimental for native employees' wages.

The role of integration in relation to wealth appears to need extra attention in research. Longhi et al. (2005) found that the effect of immigration on wages can differ but is either negative to such a small extent that it is negligible, or it can even be positive. This contradicts with neoclassical theories on the matter (Longhi et al., 2005). While several potential explanations have been explored for this remarkable outcome, Longhi et al. (2005) argue that the under-researched possibility of institutional factors preventing markets from adjusting as anticipated after an immigration shock should be considered. The other theoretical arguments discussed are also not decisively pointing towards one type of effect. The positive effect seems to slightly have the upper hand, from which the following hypothesis follows:

H2: Citizens of states with higher levels of immigrant integration policy, know higher average individual wealth compared to citizens in states with lower levels of immigrant integration policy.

2.3.3 Public finances

According to the OECD (2014), a migrant's ability to contribute to public finances is mainly determined by their employment status, particularly in countries with extensive welfare systems. If immigrants' employment rates were increased to match those of native-born citizens, many European OECD nations could experience significant fiscal benefits. This is also what Entzinger and Biezeveld (2003) argue for, claiming that if immigrants' use of social security and the welfare system is at the same level as that of natives, integration is successful. Therefore, instead of being seen as a cost, efforts to improve immigrants' integration could be regarded as an investment (Kancs & Lecca, 2018). Kancs & Lecca (2018) find that integrated migrants first might be costly for the government, but that this will turn positive in the long-term as the net benefits of integration exceed the costs.

Gustafsson and Österberg (2000) also found a clear relationship between years since migration and contributions to the public sector among persons of working ages, suggesting that assimilation and skill acquisition can play a role in the positive impact of migrants on public finances. This relationship mostly relates to immigrants having found their place in their new country in terms of employment, and no longer having to rely on income security (Entzinger & Biezeveld, 2003). This indicates that if this process of assimilation happens at a

faster rate, which can be achieved through integration policies, the effect on public finances can become (more) positive at a quicker rate. From this follows the third hypothesis:

H3: States with higher levels of immigrant integration policies, experience less burden on their public finances compared to states with lower levels of immigrant integration policies.

3. Methodology

3.1 Scope of study

To determine to what extent the level of policy regarding the integration of immigrants has an impact on economies of destination countries, a quantitative data analysis is conducted. This research aims to compare states belonging to different groups, where each group represents a level of integration policy. It is an important contribution to the literature because statistical analyses of empirical data in this research field are limited. The type of analysis allows to draw conclusions that are embedded in empirical evidence.

The choice for this selection of countries is based on the operationalization of the level of integration policy. The categorisation thereof is derived from the Migrant Integration Policy Index (MIPEX) (2020). MIPEX' data contain measurements of integration policies of 56 countries (Migrant Integration Policy Index, n.d.-b). Not all fifty-six states made it into the dataset since data on the dependent variables, specifically employment and public finances, was limited to the countries that did make the cut. It was tried to supplement those variables with information on missing countries through other sources, but unfortunately that could not be achieved due to differences in measurement methods. That is why the analysis covers 33 OECD states which can be found in the *List of countries* in Appendix 1.

The time scope of this research is primarily based on the European Union (EU). In 2015, the EU was affected by massive migration flows towards its member states (Abassi et al., 2015). It was therefore deemed interesting to look at data in 2018, because then the effects of such a crisis would be noticeable and the situation would be more stabilized. When looking at data from UNHCR (2022) one can see that 2018 was also the year before the number of asylum applicants increased by a lot compared to the countries before (3.5 million in 2018 compared to 4.2 million in 2019).

3.2 Data selection

There has not been created a dataset before that addresses the data needed to answer the research question. Therefore, the dataset used is 'Immigrant Integration Policy and Economic Effects 2018', which has been created specifically for this research by combining data from different sources. This section discussed where data is gathered from as well as a justification for that choice.

3.2.1 Independent variable

Integration policy

To create a clear comparison of different levels of integration policy across states, the integration policies of each respective country will be assessed to fit into one of four categories. These categories are based on the Migrant Integration Policy Index (2020), also known as MIPEX. This is a measurement of integration policies that covers different dimensions of immigrant integration (Migrant Integration Policy Index, n.d.-b). MIPEX is among the most established and inclusive indexes on the development of immigrant integration policies, and thus a good tool for comparison of states with different levels of integration policy (Gregurović & Župarić-Iljić, 2018).

The indicators used by MIPEX are based on eight policy fields which are used to benchmark laws and policies of analysed states against. These are 'labour market mobility; family reunification; education; political participation; permanent residence; access to nationality; anti-discrimination; and health' (Migrant Integration Policy Index, n.d.-a), which is consistent with the established relevant elements of integration policy in the literature review (Beverelli, 2021; Penninx & Garcés-Mascareñas, 2016). The score of each indicator within a policy field is combined to create an average score for that field, and the scores of the fields are combined to create a final score on the index (Migrant Integration Policy Index, n.d.-a). Data on which the scores are based is gathered by a team of research staff and in addition national experts are called upon (Migrant Integration Policy Index, n.d.-a).

MIPEX (2020) themselves assessed the overall scores into six categories. Two of those are excluded from this research, because none of the included states had a score between 0 and 20. The four remaining categories have been adapted from MIPEX (2020). Category 1 contains states with a MIPEX score between 21 and 40, category 2 scores 41 to 59, category 3 scores 60 to 79, and category 4 scores 80 to 100. MIPEX (2020) addresses the categories with favourability, where category 1 is slightly unfavourable, and category 4 is favourable. For clarity purposes, this thesis uses the same labels.

3.2.2 Dependent variables

Data for the dependent variables has been derived from the OECD, as will be shown below. The OECD is committed to creating evidence-based international standards (OECD, n.d.).

This allows us to make a good comparison because all measurements were measured by one organization and all countries have thus been analysed the same way. If national data was used, for example, this could lead to differences in measurements and definitions, which could lead to incorrect comparisons.

Employment

Employment is operationalized as the difference between the total employment rate and the native employment rate. The goal of this thesis is to analyse the impact of immigrant integration policies on the economy of destination states, so the focus is on the best economic outcome from the perspective of the destination country and its (native) citizens. For natives, an important consideration is whether due to integration of migrants their jobs are compromised (DeVoretz, 2006), which is the motivation for this operationalization. To create an indicator for this variable, data from the OECD (2023b; 2023c) on the total employment and native employment have been used. By subtracting the total employment rate from the native employment rate, it gets highlighted whether natives in a destination country were employed above, equal to, or below average employment of that country.

OECD (2023b; 2023c) measured employment by looking at the share of the working age population (people between the ages 15 and 64) that was employed at the time of measuring. Employed is understood as gainful working for at least one hour per week (OECD 2023b; OECD2023c).

Wealth

To measure wealth, the gross domestic product per capita of a country is used as an indicator. This is often used as an indicator for living standards and wealth (Noja et al., 2018). The data therefore has been derived from data provided by the OECD (2023a). GDP per capita is a good measurement of wealth because GDP in general is the most accurate indicator to capture economic activity (OECD, 2023a), and when looking at its value per capita the translation to the individual wealth is made.

Public finances

It is difficult to measure public finance specifically focused on and related to migration and integration policy as accurate as one might wish, because every state has different government benefits, expenditures, et cetera (Kancs & Lecca, 2018). Because of that, a more general

measurement has been opted for, and the concept is split into two variables. There has been opted for an indicator focusing on the state's expenditures by looking at social spending, and on the state's income by looking at tax on income, based on data from the OECD (2023d; 2023e).

Social expenditure encompasses various forms, including cash benefits, direct provision of goods and services, and tax breaks with social objectives, which are controlled by general government (OECD, 2023d). These benefits are typically aimed at specific groups such as low-income households, elderly or young people, individuals with a disability or sickness, or unemployed people (OECD, 2023d). To be classified as 'social' programs must involve the redistribution of resources or mandatory participation (OECD, 2023d).

Tax on personal income refers to the taxes imposed on the net income and capital gains of individuals, accounting for allowable tax reliefs (OECD, 2023e). This measurement encompasses all government levels and is expressed as a percentage of total taxation. Earlier literature describes that migrants could possibly outweigh their appeal on social benefits by paying more in taxes if they have a good job (Entzinger & Biezeveld, 2003), which is why both these indicators are a good fit.

3.2.3 Control variables

It is important to include covariates into the model because they can enhance the capacity to identify distinctions between the different levels of favourability of immigrant integration policy. The covariates decided upon are the number of people with a recognized and rejected per state in 2018. These data are derived from data on refugees from the United Nations High Commissioner for Refugees (UNHCR, n.d.). These are important covariates, because the theoretical framework of this thesis is primarily based on the impact of migration on economic aspects which is tried to link to integration policy. However, if migration itself is not taken into the equation, and thus not controlled for, we cannot indicate that the possible connection is due to migration flows.

3.3 Data analysis

The data will be analysed through a one-way multivariate analysis of variance (MANOVA). This type of method has been chosen because it allows one to investigate the influence of one independent variable on multiple dependent variables (Field, 2017, pp. 737-775). A

MANOVA can showcase statistically significant differences between means of categories (Field, 2017). The first model in the results is based on a regular MANOVA, and the second and third model are derived from a one-way multivariate analysis of covariance. This is an extension of MANOVA to possibly better the capacity to predict differences between the different levels of favourability of immigrant integration policy. In total there are thus three models, the first one without a control variable, the second one being controlled for ‘asylum recognized’ and the third being controlled for ‘asylum rejected’. The analysis is conducted through computer program IBM SPSS Version 27.

4. Results

4.1 Descriptive statistics

4.1.1 Independent variable

The sample of this thesis entails 33 OECD countries. The independent variable is the MIPEX-score. The scores have been divided into four categories. Four of the analysed countries had a slightly unfavourable score, nineteen countries had a halfway favourable score, six countries had a slightly favourable score and four had a favourable score (Appendix 2.2).

4.1.2 Dependent variables

The descriptive statistics for the dependent variables are presented in Table 1. The table shows the mean and standard deviation of the dependent variable for each group of the independent variable. All three models are combined in the table. The first adjusted mean refers to the model that is controlled for the number of recognized asylum applicants and the second adjusted mean to the model that is controlled for the number of rejected asylum applicants. The adjusted mean refers to the estimated average values for each dependent variable within different groups, taking into account that the covariate is set to its average value, which is the average value observed across the entire study.

The descriptives in the table allow for the provision of some general trends. For the dependent variable on the difference between the native employment rate and the general employment rate, it is remarkable that the results for countries with slightly unfavourable and favourable integration policies have similar means. For the same variable it is striking that countries with a favourable integration policy are far ahead of the rest. When looking at the descriptives of the gross domestic product per capita, it is surprising that there is an upward trend that is truncated by countries with favourable levels of integration policy, for which the mean is just above the mean of countries with slightly unfavourable integration policies. For social spending there is an uninterrupted upward trend. The percentage of total tax revenue gathered from income also expands when the level of integration policy increases but has a slight fallback for countries with favourable integration policies.

Table 1. Descriptive statistics dependent variables

	Economic aspect												
	Employment rate difference			**GDP per capita**			**Social Spending**			**Tax on Income**			**N**
Level of integration policy	*M* (*SD*)	M_{adj1} (*SE*)	M_{adj2} (*SE*)	*M* (*SD*)	M_{adj1} (*SE*)	M_{adj2} (*SE*)	*M* (*SD*)	M_{adj1} (*SE*)	M_{adj2} (*SE*)	*M* (*SD*)	M_{adj1} (*SE*)	M_{adj2} (*SE*)	
Slightly unfavourable	-0.350 (1.109)	-0.196 (0.848)	-0.177 (0.851)	31731.025 (3381.869)	31500.333 (9197.835)	31918.081 (9231.233)	4732.775 (1033.362)	5027.149 (1894.547)	5183.976 (1874.760)	14.775 (3.599)	15.458 (4.612)	15.296 (4.663)	4
Halfway favourable	0.337 (1.349)	0.315 (0.384)	0.295 (0.385)	46767.526 (15381.081)	46800.907 (4167.418)	46722.793 (4182.365)	8946.542 (3433.959)	8903.947 (858.394)	8838.639 (849.319)	23.816 (10.195)	23.717 (2.090)	23.691 (2.113)	19
Slightly favourable	-0.400 (2.674)	-0.442 (0.684)	-0.409 (0.683)	66152.350 (26361.3085)	66215.663 (7417.396)	66143.157 (7407.420)	12979.983 (5636.711)	12899.193 (1527.817)	12957.808 (1504.364)	32.517 (8.030)	32.329 (3.719)	32.491 (3.742)	6
Favourable	1.525 (1.773)	1.540 (0.836)	1.561 (0.836)	35745.075 (22012.068)	35731.239 (9071.132)	35793.294 (9079.692)	10464.050 (3096.7292)	10493.189 (1868.449)	10558.652 (1843.781)	28.225 (7.076)	28.293 (4.549)	28.334 (4.586)	4
Total	0.264 (1.698)			47134.470 (20047.327)			9353.076 (4240.7443)			24.836 (10.011)			33

4.2 Assumptions

The assumptions that must be met for the first model, a one-way multivariate analysis of variance, partly differ from those to be met for the second and third model, which are one-way multivariate analyses of covariance. Most assumptions have been met, but some small violations must be named and considered as a warning before looking further at the results, because the data have been included in the analysis.

In the MANOVA a total of four univariate outliers have been found for the difference in employment rate and for GDP per capita (Appendix 2.4). Considering the small number of cases and because these are aspects of a country that rely on many influences making, so it is not unusual that some countries have extreme values on these variables. This is why it has been decided to include the outliers in the analysis.

The MANOVA also had some minor issues with multivariate normality. The difference between native and total employment was not completely normally distributed for group 1, as assessed by Shapiro-Wilk's test ($p = 0.029$) This was also the case for tax on income for group 2 ($p = 0.007$) (Appendix 2.4).

Testing for multicollinearity showed that in the MANOVA that the correlation between employment rate and social spending was very small, $r(32) = 0.40$, $p = 0.823$ (Appendix 2.6). Ideally, all dependent variables are moderately correlated, and this effect is on the smaller size. This is not a problem but should be kept in mind when interpreting the results.

The MANCOVA with recognized asylum applicants as covariate met all assumptions, however only the residual for tax on income for the countries halfway favourable integration policies was not normally distributed, $p = 0.002$ (Appendix 3.9).

The MANCOVA with rejected asylum applicants as covariate had one univariate outliers, which can still be included as explained before. The residual for employment rates for countries with slightly unfavourable policies and the residual for tax on income for countries with halfway favourable policies were not normally distributed, $p = 0.030$ and $p = 0.003$ (Appendix 4.9).

4.3 Results

4.3.1 MANOVA & MANCOVA

Table 2. MANOVA and MANCOVA analysis of the influence of favourability of immigrant integration policy

	Model 1	Model 2	Model 3
Wilks' Lambda	0.420*	0.415*	0.410*
F	2.233	2.184	2.219
Hypothesis df	12.000	12.000	12.000
Error df	69.081	66.435	66.435
Partial Eta Squared	0.251	0.254	0.272
N	33	33	33

***p < 0.001, **p < 0.01, *p < 0.05

A one-way multivariate analysis of variance was run to determine the effects of the favourability of immigrant integration policy on the economy of a destination country. This can be found in model 1. Model 2 represents the MANCOVA, which is run to determine the same effects, but controlled for the number of recognized asylum applicants, and model 3 is controlled for the number of rejected asylum applicants. The economic variables assessed are differences between total employment rates and native employment rates, GDP per capita, social spending and income on taxes. The analyses can tell us whether the means of the different groups, e.g., the levels of integration policy, are statistically significantly different for the combined dependent variables, e.g., the economic aspects.

Model 1 shows that there is a statistically significant difference between the level of integration policy on the economy of the destination country, $F(12.000,69.081)$: 2.233, p = 0.019; Wilk's $\Lambda = 0.420$; partial $\eta 2 = 0.251$.

Model 2 shows that there is a statistically significant difference between the level of integration policy on the economy of the destination country after controlling for the number of recognized asylum applicants, $F(12.000,66.435)$: 2.184, $p = 0.022$; Wilk's $\Lambda = 0.415$; partial $\eta 2 = 0.254$.

Model 3 shows that there is a statistically significant difference between the level of integration policy on the economy of the destination country after controlling for the number

of rejected asylum applicants, $F(12.000,66.435)$: 2.219, $p = 0.020$; Wilk's $\Lambda = 0.410$; partial $\eta 2 = 0.272$.

All three models thus have statistically significant results. The p-value of model 1 is the lowest ($p = 0.019$), indicating that there is a 1.9% chance that the results are incorrect. This is a lower percentage than for the other two models, which is why it is decided to only do a follow-up test for model 1.

4.3.2 Discriminant analysis

A discriminant analysis is the best approach to follow up a significant MANOVA because it provides a more detailed breakdown of the linear combination of outcome variables (as opposed to univariate *F*s) (Field, 2017, p. 765). Discriminant analysis examines how to effectively separate groups using multiple predictors. While MANOVA predicts outcome measures based on a grouping variable, discriminant function analysis predicts a grouping variable based on a set of outcome measures (Field, 2017, p. 765). The fundamental principles of both tests remain the same: MANOVA identifies linear variates that differentiate groups, which are equivalent to the functions in discriminant function analysis (Field, 2017, p. 765).

The discriminant analysis revealed three discriminant functions. The first function explained 62.9% of the variance, canonical $R^2 = 0.638$. In combination these discriminant functions significantly differentiated the policy levels, $\Lambda = 0.420$, $\chi^2(12) = 24.285$, $p = 0.019$. The second function explained 35.3% of the variance, canonical $R^2 = 0.529$. Removing the first function indicated that the second and third function did not significantly differentiate the policy levels, $\Lambda = 0.708$, $\chi^2(6) = 9.673$, $p = 0.139$. The third function explained 1.9% of the variance, conical $R^2 = 0.142$. Removing the first and second function indicated that the third function did not significantly differentiate the policy levels, $\Lambda = 0.980$, $\chi^2(2) = 0.568$, $p = 0.753$ (Appendix 5.2).

The correlations between outcomes and the discriminant functions revealed that difference between native and total employment loaded more highly on the third function ($r = 0.782$) than on the first ($r = -0.12$) and second function ($r = 0.553$); GDP per capita loaded more highly on the first function ($r = 0.646$) and third function ($r = 0.391$) than on the second ($r = -0.524$); social spending loaded more highly on the first function ($r = 0.788$) than on the second ($r = 0.065$) and third function ($r = 0.228$); and tax on income loaded more highly on

the first function ($r = 0.704$) than on the second ($r = 0.124$) and third function ($r = 0.115$) as well (Appendix 5.2).

The discriminant function plot and functions at group centroids showed that the first function discriminated states with slightly unfavourable and halfway favourable integration policies from states with slightly favourable and favourable integration policies. The second function discriminated states with slightly unfavourable, halfway favourable, and slightly favourable integration policies from states with favourable integration policies. Lastly, the third function discriminated states with slightly unfavourable, slightly favourable, and favourable integration policies from states with halfway favourable integration policies (Appendix 5.2).

5. Discussion

5.1 Interpretation and implications of results

To answer the research question *To what extent does immigrant integration policy influence the economy of destination countries?* the information of the previous chapter needs to be combined. The MANOVA showed that the level of favourability of immigrant integration policy can have a significant effect on economic aspects of a destination country, which has been followed up with a discriminant analysis. With this it is attempted to see whether there is an underlying dimension that leads to an influence on the destination economy.

Using the group and total means as presented in Table 1, it can be estimated which level of favourability of immigrant integration policy is associated with the highest values on the dependent variables. The total mean of the difference between native and total employment rates is 0.263 percentage point. The associated group means shows that states with halfway favourable and favourable integration policies had a higher positive difference, indicating that the native employment rate was higher than the total employment rate of that state, whereas states with slightly unfavourable or slightly favourable integration policies had lower native employment rates than total employment rates. Regarding the first hypothesis that claimed that more favourable immigrant integration policies had native employment rates similar or higher than general employment rates, the relationship is slightly different. The highest positive difference is linked to states with the most favourable integration policy, as expected, but the negative mean of the third group is lower compared to the first and second group, which is not in line with our hypothesis.

The total mean of GDP per capita is $47134.470. The associated group means show that states with slightly favourable integration policies had a higher GDP per capita than all three other categories, which means that citizens in these countries experience the greatest wealth. The expectation drawn up in the hypothesis was that citizens of states with higher levels of favourability of immigrant integration policy, knew higher average individual wealth. This relationship seems to almost be true when looking at the means, as it is accurate for the first three levels. However, the highest level is an exception as its mean is in between the first and third level of integration policy.

For social spending per capita the total mean is $9353.076. Looking at the corresponding group means shows that both states with slightly favourable and favourable integration policies have a higher mean social spending, whereas countries with slightly unfavourable and halfway favourable policies have respectively a way and slightly lower mean. It is hard to determine what this means regarding the hypothesis on public finances, because this variable only provides us with absolute values but no country-specific context making it hard to determine whether a high value is good or bad in this regard.

Lastly, the total mean of tax on income as a percentage of total tax revenue is 24.836%. The group means highlight that governments of states with slightly favourable and favourable integration policies generate a higher percentage of total taxes from income of citizens. Governments of states with slightly unfavourable and halfway favourable generate, on average, a smaller percentage of tax revenue from personal income. For the same reasons as for social spending it is hard to determine what this means regarding the hypothesis on public finances. For this variable this is also harder because it is measured as a percentage of total tax revenue.

What we have discovered from the discriminant analysis is that slightly favourable and favourable integration policy can be differentiated from slightly unfavourable and halfway favourable integration policy based on variate 1, a variate that has opposite effects on employment and GDP per capita versus social spending and tax on income.

Favourable integration policy can be differentiated from slightly unfavourable, halfway favourable, and slightly favourable integration policy based on variate 2, a variate that has a positive effect on employment and social spending, a negative effect on GDP per capita, and almost no effect on tax on income.

Slightly favourable integration policy can be differentiated from the other three groups based on variate 3, a variate that has opposite effects on employment and GDP per capita versus social spending and tax on income.

Combing this information with the knowledge that has been gathered from the means, it can be concluded that favourable integration policy is better at assuring that native employment is similar or higher than total employment than the other three levels, based on variate 2. This means that hypothesis 1 can be confirmed.

Slightly favourable integration policy is best for the ensuring of the highest value of average individual wealth, as compared to the other three levels, based on the third function. This means that hypothesis 2 can partially be confirmed. The expectation that more favourable policy would be best at ensuring individual wealth is true for slightly favourable policies, but it is not for favourable policies.

Slightly favourable integration policy is also the best for achieving the highest score on social spending and tax on income, as compared to the other three levels, based on the third function. Regarding hypothesis 3 it is hard to say what this result translates into, as discussed above. Therefore, we do not accept or reject the hypothesis, as this would be too short-sighted.

These results implicate that it is almost always more beneficial for destination countries to have one of the higher levels of favourability of immigrant integration policy than slightly unfavourable, as the latter is associated with low or negative means and is differentiated from by discrimination analysis. However, results also indicate that the highest level of favourability does not always lead to the best outcomes on the economy from the perspective of the destination country. The small violations need to be kept in mind, which may slightly alter results.

5.2 Limitations

Before reaching the conclusion of this thesis, the limitations of the research should be attended to. First, one should be careful with the generalisability of the research at hand. The analysis is based on thirty-three countries, that differ to a great extent from each other. Numbers of the UNHCR show that countries deal to a very different range with total numbers of asylum applicants in a year (UNHCR, n.d.). This has been tried to be controlled for, by looking at numbers of recognized and rejected applications, but since the model did not improve by adding covariates, the impact of these factors is still unsure. Besides that, there are multiple state-specific factors that have not been included in the current research, that could play an underlying role in certain relations and effect sizes.

Another limitation originates from the dependent variables. Especially for public finances it is extremely hard to find an indicator that truly matches the intention of the research. The aim was to see whether the integration of immigrants creates extra pressure on social benefit systems and to weigh this against the extra tax revenues countries can generate from their

integration. However, because government systems regarding those expenditures and revenues differ to such a great extent, it is almost impossible to compare this on such a wide scale. The finding that countries with favourable integration policies have a high amount of social spending per capita thus does not necessarily tell us that favourable integration leads to a major burden on the social benefits system, as those countries could just have a more extensive welfare system in their state.

The third limitation is that the current analysis does not account for differences between short, medium- and long-term changes. Before conducting the analysis, it was tested whether the dependent variables provided a better match if they were measured one or two years later than the measurement of the integration policy, but this did not lead to significant results, whereas measurements of the same year did. That was why for this thesis it was decided to use that data. SPSS, compared to other statistics computer programs, is also not the best tool for such comparisons over time, which also play a role in this decision. Differences in term changes might thus be overlooked by the current way of analysis.

6. Conclusion

The analysis conducted to answer the research question *To what extent does immigrant integration policy influence the economy of destination countries?* showed that the relationship between different levels of immigrant integration policy and the researched aspects of the economy of destination countries was significant. The hypothesis on the positive relationship between higher levels of integration policy and relative native employment rates is accepted. The influence of higher levels of integration policy on individual wealth is partially confirmed, because slightly favourable policies were associated with higher GDP per capita compared to the lower levels of policies, but favourable policies were not. The hypothesis on public finances is neither rejected nor accepted, because the indicators are insufficient to assign the judgement that the hypothesis was trying to reach.

As discussed, the indicators for public finances formed a limitation for this thesis. However, the one-way multivariate analysis of variance did produce a significant result, indicating that there is a relationship worth investigating further. Therefore, it would be very interesting for further research to study this relationship by looking at the government expenditures and incomes related to (the integration of) migrants, to get a better understanding of how this relates to each other.

An important recommendation would be to include both perspectives regarding benefits of immigrant integration policy into one framework and maybe even into an index. MIPEX (2020) is a very useful index to assess to what extent policies try to target specific elements of integration, but it does not truly show the effects it has. Since countries and persons across the world will probably have to deal with migration a great amount in the future, as there is still a lot of unrest in the world and since environmental migration is also upcoming (McLeman & Gemenne, 2018), it will be very interesting to have a better sense of how to create solutions that considers the wishes of all stakeholders. A complete picture would include the socio-economic aspects of the destination country, as well as ‘humanitarian, security, equality and social inclusion’ aspects (Kancs & Lecca, 2018, p. 2628).

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Appendix

1. List of countries

1. Latvia
2. Lithuania
3. Slovakia
4. Turkey
5. Austria
6. Czechia
7. Denmark
8. Estonia
9. France
10. Germany
11. Greece
12. Hungary
13. Iceland
14. Ireland
15. Israel
16. Italy
17. Mexico
18. Netherlands
19. Poland
20. Slovenia
21. Spain
22. Switzerland
23. United Kingdom
24. Australia
25. Belgium
26. Luxembourg
27. New Zealand
28. Norway
29. United States of America
30. Canada

31. Finland
32. Portugal
33. Sweden

2. MANOVA

2.1 Syntax MANOVA

```
SPLIT FILE OFF.

GLM EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018 BY Mipex2018recoded

  /METHOD=SSTYPE(3)

  /INTERCEPT=INCLUDE

  /POSTHOC=Mipex2018recoded(TUKEY)

  /EMMEANS=TABLES(Mipex2018recoded)

  /PRINT=DESCRIPTIVE ETASQ HOMOGENEITY

  /CRITERIA=ALPHA(.05)

  /DESIGN= Mipex2018recoded.
```

2.2 Output MANOVA

Between-Subjects Factors

		N
MIPEX overall score 2018 categorized	1.00	4
	2.00	19
	3.00	6
	4.00	4

Descriptive Statistics

	MIPEX overall score 2018 categorized	Mean	Std. Deviation	N
Difference between employment rate native-born and general 2018	1.00	-.35000000	1.10905365	4
	2.00	.336842105	1.34916045	19
	3.00	-.40000000	2.67357439	6
	4.00	1.52500000	1.77270979	4
	Total	.263636364	1.69775922	33
Gross domestic product per capita 2018	1.00	31731.025	3381.8691	4
	2.00	46767.526	15381.0811	19
	3.00	66152.350	26361.3085	6
	4.00	35754.075	22012.0677	4
	Total	47134.470	20047.3269	33
Social spending per capita 2018	1.00	4732.775	1033.3620	4
	2.00	8946.542	3433.9586	19
	3.00	12979.983	5636.7111	6
	4.00	10464.050	3096.7292	4
	Total	9353.076	4240.7443	33
Tax on personal income as percentage of total tax revenue 2018	1.00	14.775	3.5985	4
	2.00	23.816	10.1948	19
	3.00	32.517	8.0300	6
	4.00	28.225	7.0755	4
	Total	24.836	10.0107	33

Box's Test of Equality of Covariance Matrices[a]

Box's M	39.706
F	2.660
df1	10
df2	384.789
Sig.	.004

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Mipex2018 recoded

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.906	62.775[b]	4.000	26.000	<.001	.906
	Wilks' Lambda	.094	62.775[b]	4.000	26.000	<.001	.906
	Hotelling's Trace	9.658	62.775[b]	4.000	26.000	<.001	.906
	Roy's Largest Root	9.658	62.775[b]	4.000	26.000	<.001	.906
Mipex2018recoded	Pillai's Trace	.704	2.147	12.000	84.000	.022	.235
	Wilks' Lambda	.420	2.233	12.000	69.081	.019	.251
	Hotelling's Trace	1.090	2.240	12.000	74.000	.018	.266
	Roy's Largest Root	.685	4.796[c]	4.000	28.000	.004	.407

a. Design: Intercept + Mipex2018recoded

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Levene's Test of Equality of Error Variances[a]

		Levene Statistic	df1	df2	Sig.
Difference between employment rate native-born and general 2018	Based on Mean	1.725	3	29	.184
	Based on Median	1.046	3	29	.387
	Based on Median and with adjusted df	1.046	3	17.182	.398
	Based on trimmed mean	1.513	3	29	.232
Gross domestic product per capita 2018	Based on Mean	1.779	3	29	.173
	Based on Median	1.211	3	29	.323
	Based on Median and with adjusted df	1.211	3	17.204	.336
	Based on trimmed mean	1.625	3	29	.205
Social spending per capita 2018	Based on Mean	1.972	3	29	.140
	Based on Median	1.900	3	29	.152
	Based on Median and with adjusted df	1.900	3	18.101	.166
	Based on trimmed mean	1.971	3	29	.140
Tax on personal income as percentage of total tax revenue 2018	Based on Mean	.957	3	29	.426
	Based on Median	.646	3	29	.592
	Based on Median and with adjusted df	.646	3	20.866	.594
	Based on trimmed mean	.783	3	29	.513

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Mipex2018recoded

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Difference between employment rate native-born and general 2018	10.615[a]	3	3.538	1.257	.307	.115
	Gross domestic product per capita 2018	3.640E+9[b]	3	1.213E+9	3.816	.020	.283
	Social spending per capita 2018	1.724E+8[c]	3	57464215.1	4.134	.015	.300
	Tax on personal income as percentage of total tax revenue 2018	824.568[d]	3	274.856	3.346	.033	.257
Intercept	Difference between employment rate native-born and general 2018	1.719	1	1.719	.611	.441	.021
	Gross domestic product per capita 2018	4.525E+10	1	4.525E+10	142.303	<.001	.831
	Social spending per capita 2018	1.916E+9	1	1.916E+9	137.841	<.001	.826
	Tax on personal income as percentage of total tax revenue 2018	13717.449	1	13717.449	166.986	<.001	.852
Mipex2018recoded	Difference between employment rate native-born and general 2018	10.615	3	3.538	1.257	.307	.115
	Gross domestic product per capita 2018	3.640E+9	3	1.213E+9	3.816	.020	.283
	Social spending per capita 2018	172392645	3	57464215.1	4.134	.015	.300
	Tax on personal income as percentage of total tax revenue 2018	824.568	3	274.856	3.346	.033	.257
Error	Difference between employment rate native-born and general 2018	81.622	29	2.815			
	Gross domestic product per capita 2018	9.221E+9	29	317961905			
	Social spending per capita 2018	403092553	29	13899743.2			
	Tax on personal income as percentage of total tax revenue 2018	2382.269	29	82.147			
Total	Difference between employment rate native-born and general 2018	94.530	33				
	Gross domestic product per capita 2018	8.618E+10	33				
	Social spending per capita 2018	3.462E+9	33				
	Tax on personal income as percentage of total tax revenue 2018	23562.720	33				
Corrected Total	Difference between employment rate native-born and general 2018	92.236	32				
	Gross domestic product per capita 2018	1.286E+10	32				
	Social spending per capita 2018	575485198	32				
	Tax on personal income as percentage of total tax revenue 2018	3206.836	32				

a. R Squared = ,115 (Adjusted R Squared = ,024)

b. R Squared = ,283 (Adjusted R Squared = ,209)

c. R Squared = ,300 (Adjusted R Squared = ,227)

d. R Squared = ,257 (Adjusted R Squared = ,180)

2.3 Assumptions MANOVA syntax: Shapiro-Wilk & boxplot

```
EXAMINE VARIABLES=EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018 BY
  Mipex2018recoded
 /PLOT BOXPLOT NPPLOT
 /COMPARE GROUPS
 /STATISTICS NONE
 /CINTERVAL 95
 /MISSING LISTWISE
 /NOTOTAL.
```

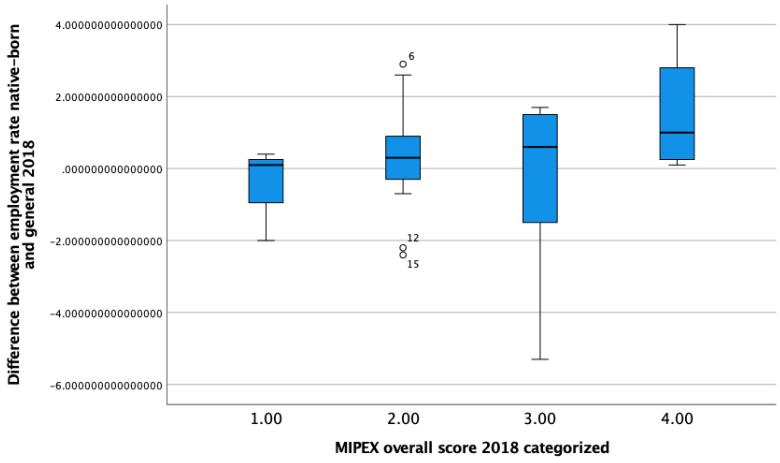
2.4 Assumptions MANOVA output: Shapiro-Wilk & boxplot

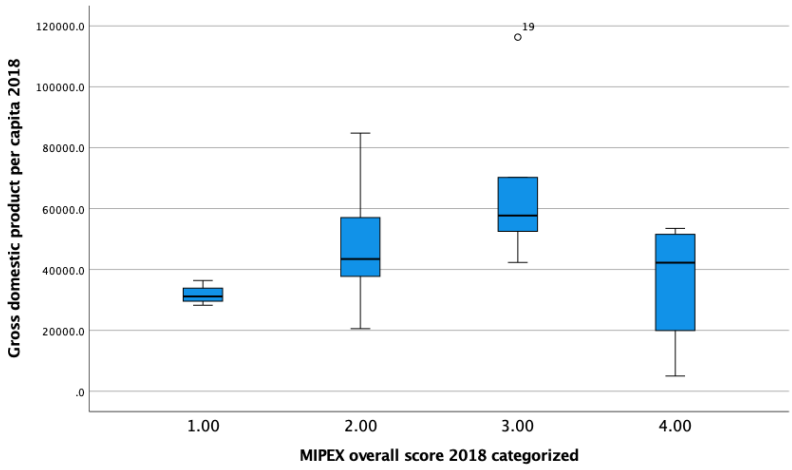
Tests of Normality

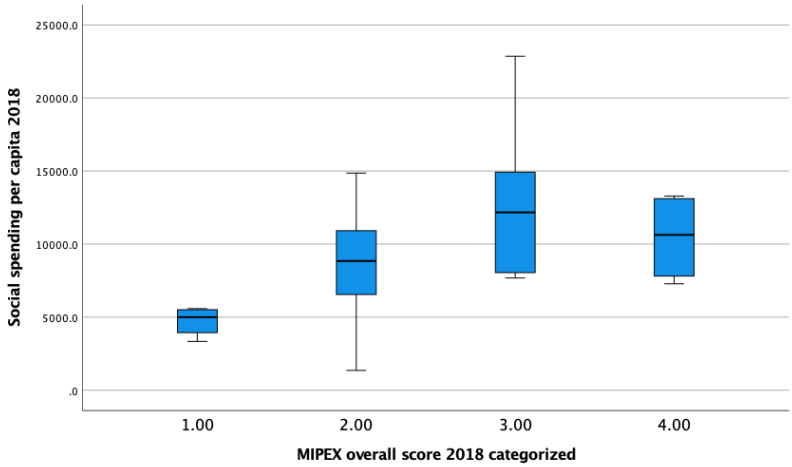
	MIPEX overall score 2018 categorized	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Difference between employment rate native-born and general 2018	1.00	.408	4	.	.737	4	.029
	2.00	.160	19	.200*	.954	19	.461
	3.00	.241	6	.200*	.825	6	.098
	4.00	.237	4	.	.880	4	.338
Gross domestic product per capita 2018	1.00	.292	4	.	.928	4	.584
	2.00	.131	19	.200*	.955	19	.475
	3.00	.272	6	.189	.821	6	.089
	4.00	.235	4	.	.881	4	.343
Social spending per capita 2018	1.00	.256	4	.	.891	4	.389
	2.00	.099	19	.200*	.975	19	.865
	3.00	.198	6	.200*	.896	6	.351
	4.00	.288	4	.	.833	4	.176
Tax on personal income as percentage of total tax revenue 2018	1.00	.181	4	.	.993	4	.974
	2.00	.195	19	.057	.850	19	.007
	3.00	.254	6	.200*	.838	6	.125
	4.00	.288	4	.	.935	4	.626

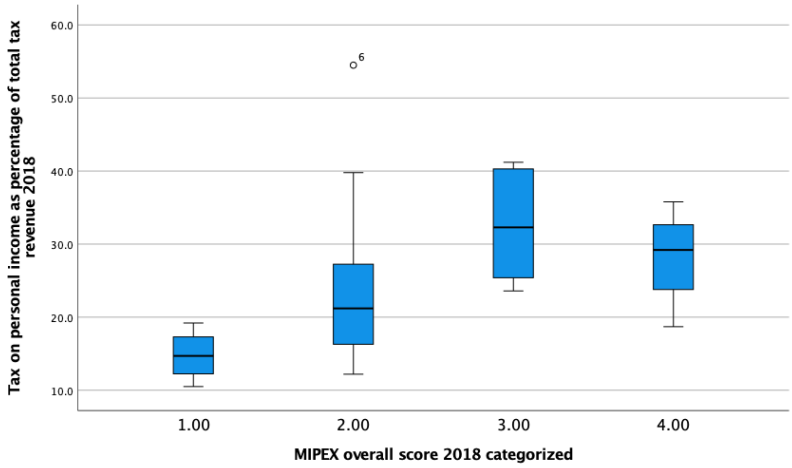
*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction









2.5 Syntax MANOVA assumptions: Pearson correlation

CORRELATIONS

/VARIABLES=EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018

/PRINT=TWOTAIL NOSIG FULL

/MISSING=PAIRWISE.

2.6 Output MANOVA assumptions: Pearson correlation

Correlations

		Difference between employment rate native-born and general 2018	Gross domestic product per capita 2018	Social spending per capita 2018	Tax on personal income as percentage of total tax revenue 2018
Difference between employment rate native-born and general 2018	Pearson Correlation	1	-.172	.040	.300
	Sig. (2-tailed)		.340	.823	.089
	N	33	33	33	33
Gross domestic product per capita 2018	Pearson Correlation	-.172	1	.798**	.330
	Sig. (2-tailed)	.340		<.001	.061
	N	33	33	33	33
Social spending per capita 2018	Pearson Correlation	.040	.798**	1	.419*
	Sig. (2-tailed)	.823	<.001		.015
	N	33	33	33	33
Tax on personal income as percentage of total tax revenue 2018	Pearson Correlation	.300	.330	.419*	1
	Sig. (2-tailed)	.089	.061	.015	
	N	33	33	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

2.7 Syntax MANOVA assumptions: Scatterplot

SORT CASES BY Mipex2018recoded.

SPLIT FILE SEPARATE BY Mipex2018recoded.

* Chart Builder.

GGRAPH

/GRAPHDATASET NAME="graphdataset" VARIABLES=EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018

TaxIncomeTax2018 MISSING=LISTWISE REPORTMISSING=NO

/GRAPHSPEC SOURCE=INLINE

/FITLINE TOTAL=NO.

BEGIN GPL

SOURCE: s=userSource(id("graphdataset"))

DATA: EmpDifNatGen2018=col(source(s), name("EmpDifNatGen2018"))

```
  DATA: GDPcap2018=col(source(s), name("GDPcap2018"))

  DATA: SocialSpendingCap2018=col(source(s), name("SocialSpendingCap2018"))

  DATA: TaxIncomeTax2018=col(source(s), name("TaxIncomeTax2018"))

  GUIDE: axis(dim(1.1), ticks(null()))

  GUIDE: axis(dim(2.1), ticks(null()))

  GUIDE: axis(dim(1), gap(0px))

  GUIDE: axis(dim(2), gap(0px))

  GUIDE: text.title(label("Scatterplot Matrix Difference between employment rate native-born and ",

    "general 2018,Gross domestic product per capita 2018,Social spending per capita 2018,Tax on ",

    "personal income as percentage of total tax revenue 2018"))

  TRANS: EmpDifNatGen2018_label = eval("Difference between employment rate native-born and "+

    "general 2018")

  TRANS: GDPcap2018_label = eval("Gross domestic product per capita 2018")

  TRANS: SocialSpendingCap2018_label = eval("Social spending per capita 2018")

  TRANS: TaxIncomeTax2018_label = eval("Tax on personal income as percentage of total tax "+

    "revenue 2018")

  ELEMENT: point(position((EmpDifNatGen2018/EmpDifNatGen2018_label+GDPcap2018/GDPcap2018_label+
```

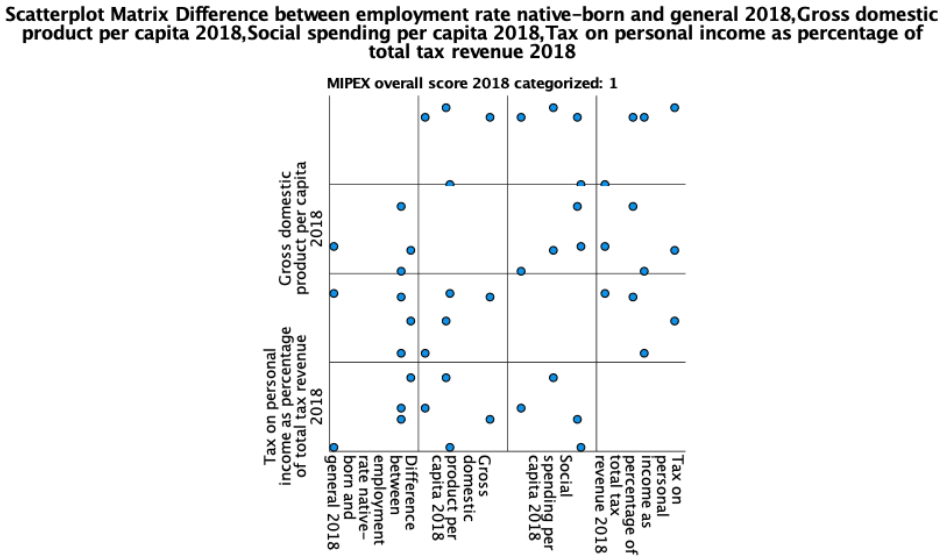
SocialSpendingCap2018/SocialSpendingCap2018_label+TaxIncomeTax2018/TaxIncomeTax2018_label)*

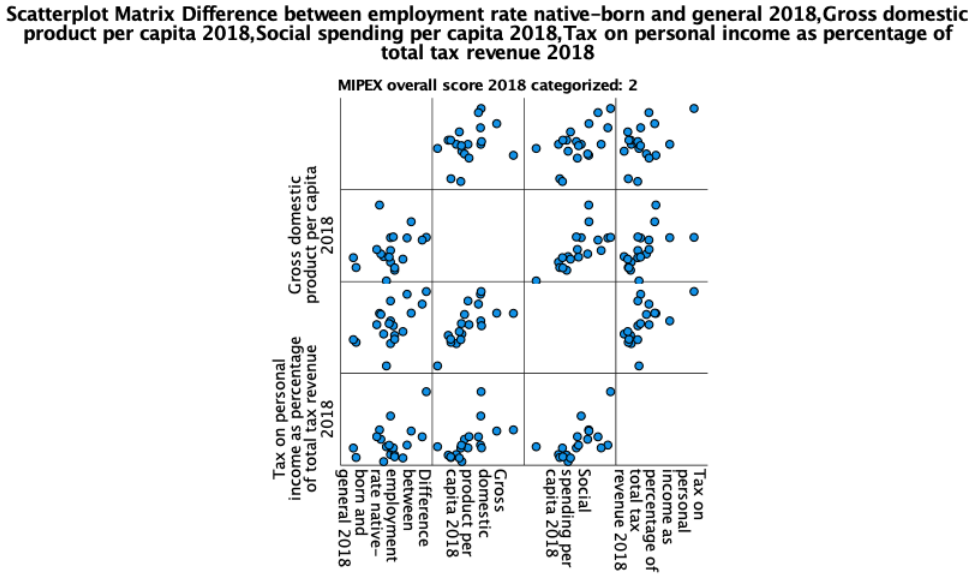
(EmpDifNatGen2018/EmpDifNatGen2018_label+GDPcap2018/GDPcap2018_label+

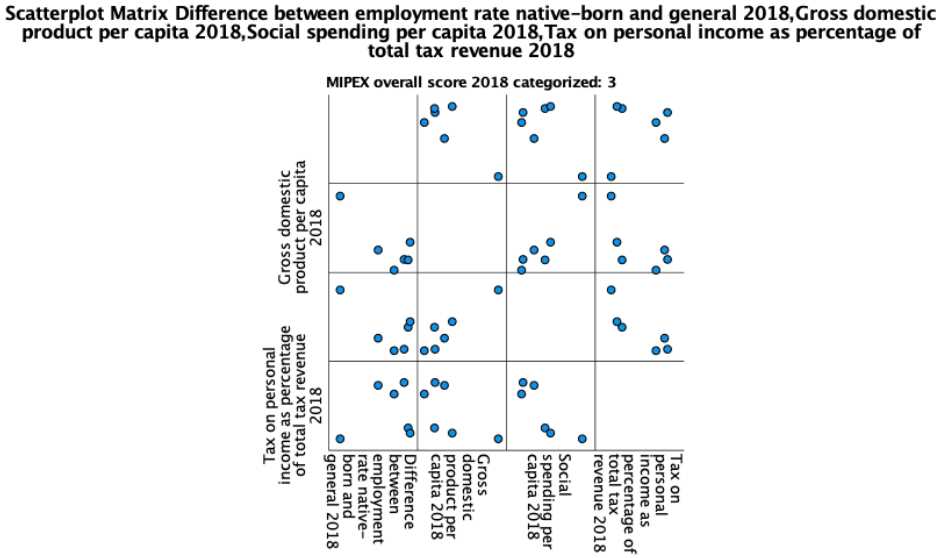
SocialSpendingCap2018/SocialSpendingCap2018_label+TaxIncomeTax2018/TaxIncomeTax2018_label)))

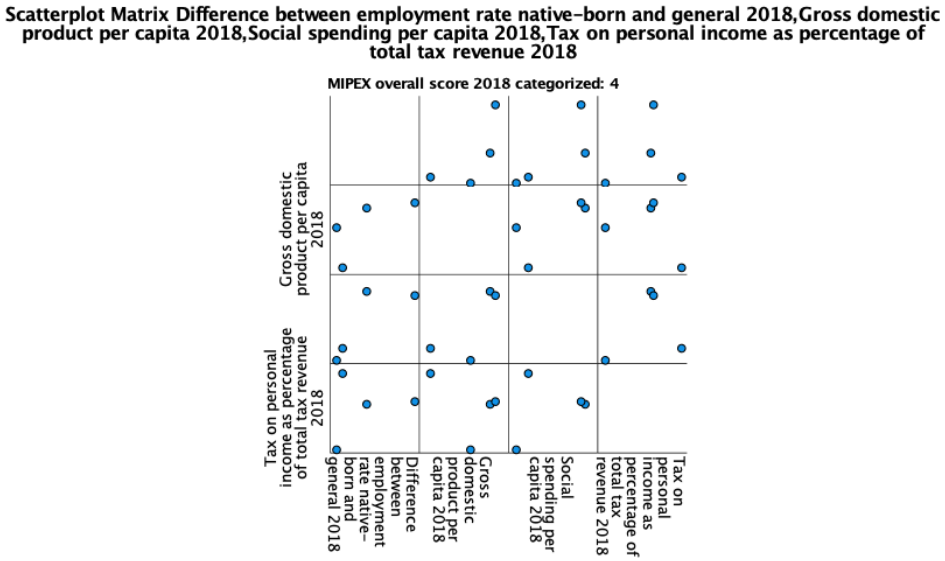
END GPL.

2.8 Output MANOVA assumptions: Scatterplot









2.9 Syntax MANOVA assumptions: Mahalanobis distance

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REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT subject_id
  /METHOD=ENTER EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018
TaxIncomeTax2018
  /SAVE MAHAL.
```

3. MANCOVA Recognized

3.1 Syntax MANCOVA Recognized

GLM EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018 BY Mipex2018recoded WITH

Recognized2018

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/SAVE=RESID ZRESID

/EMMEANS=TABLES(Mipex2018recoded) WITH(Recognized2018=MEAN) COMPARE ADJ(BONFERRONI)

/PRINT=DESCRIPTIVE ETASQ HOMOGENEITY

/CRITERIA=ALPHA(.05)

/DESIGN=Recognized2018 Mipex2018recoded.

3.2 Output MANCOVA Recognized

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.890	50.443[b]	4.000	25.000	<.001	.890
	Wilks' Lambda	.110	50.443[b]	4.000	25.000	<.001	.890
	Hotelling's Trace	8.071	50.443[b]	4.000	25.000	<.001	.890
	Roy's Largest Root	8.071	50.443[b]	4.000	25.000	<.001	.890
Recognized2018	Pillai's Trace	.131	.942[b]	4.000	25.000	.456	.131
	Wilks' Lambda	.869	.942[b]	4.000	25.000	.456	.131
	Hotelling's Trace	.151	.942[b]	4.000	25.000	.456	.131
	Roy's Largest Root	.151	.942[b]	4.000	25.000	.456	.131
Mipex2018recoded	Pillai's Trace	.715	2.112	12.000	81.000	.025	.238
	Wilks' Lambda	.415	2.184	12.000	66.435	.022	.254
	Hotelling's Trace	1.103	2.176	12.000	71.000	.022	.269
	Roy's Largest Root	.653	4.410[c]	4.000	27.000	.007	.395

a. Design: Intercept + Recognized2018 + Mipex2018recoded

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Difference between employment rate native-born and general 2018	13.959[a]	4	3.490	1.248	.314	.151
	Gross domestic product per capita 2018	3.647E+9[b]	4	911811528	2.771	.047	.284
	Social spending per capita 2018	1.846E+8[c]	4	46147641.5	3.306	.024	.321
	Tax on personal income as percentage of total tax revenue 2018	890.295[d]	4	222.574	2.690	.051	.278
Intercept	Difference between employment rate native-born and general 2018	.254	1	.254	.091	.766	.003
	Gross domestic product per capita 2018	3.892E+10	1	3.892E+10	118.287	<.001	.809
	Social spending per capita 2018	1.523E+9	1	1.523E+9	109.129	<.001	.796
	Tax on personal income as percentage of total tax revenue 2018	11007.619	1	11007.619	133.049	<.001	.826
Recognized2018	Difference between employment rate native-born and general 2018	3.344	1	3.344	1.196	.283	.041
	Gross domestic product per capita 2018	7491216.52	1	7491216.52	.023	.881	.001
	Social spending per capita 2018	12197920.7	1	12197920.7	.874	.358	.030
	Tax on personal income as percentage of total tax revenue 2018	65.727	1	65.727	.794	.380	.028
Mipex2018recoded	Difference between employment rate native-born and general 2018	10.402	3	3.467	1.240	.314	.117
	Gross domestic product per capita 2018	3.619E+9	3	1.206E+9	3.666	.024	.282
	Social spending per capita 2018	156175347	3	52058449.1	3.729	.023	.285
	Tax on personal income as percentage of total tax revenue 2018	746.079	3	248.693	3.006	.047	.244
Error	Difference between employment rate native-born and general 2018	78.277	28	2.796			
	Gross domestic product per capita 2018	9.213E+9	28	329050143			
	Social spending per capita 2018	390894632	28	13960522.6			
	Tax on personal income as percentage of total tax revenue 2018	2316.542	28	82.734			
Total	Difference between employment rate native-born and general 2018	94.530	33				
	Gross domestic product per capita 2018	8.618E+10	33				
	Social spending per capita 2018	3.462E+9	33				
	Tax on personal income as percentage of total tax revenue 2018	23562.720	33				
Corrected Total	Difference between employment rate native-born and general 2018	92.236	32				
	Gross domestic product per capita 2018	1.286E+10	32				
	Social spending per capita 2018	575485198	32				
	Tax on personal income as percentage of total tax revenue 2018	3206.836	32				

a. R Squared = ,151 (Adjusted R Squared = ,030)

b. R Squared = ,284 (Adjusted R Squared = ,181)

c. R Squared = ,321 (Adjusted R Squared = ,224)

d. R Squared = ,278 (Adjusted R Squared = ,174)

Estimates

Dependent Variable	MIPEX overall score 2018 categorized	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Difference between employment rate native-born and general 2018	1.00	-.196[a]	.848	-1.932	1.541
	2.00	.315[a]	.384	-.472	1.101
	3.00	-.442[a]	.684	-1.843	.958
	4.00	1.540[a]	.836	-.172	3.253
Gross domestic product per capita 2018	1.00	31500.333[a]	9197.835	12659.422	50341.243
	2.00	46800.907[a]	4167.418	38264.338	55337.476
	3.00	66215.663[a]	7417.396	51021.816	81409.510
	4.00	35731.239[a]	9071.132	17149.867	54312.612
Social spending per capita 2018	1.00	5027.149[a]	1894.547	1146.345	8907.953
	2.00	8903.947[a]	858.394	7145.606	10662.288
	3.00	12899.193[a]	1527.817	9769.602	16028.784
	4.00	10493.189[a]	1868.449	6665.845	14320.534
Tax on personal income as percentage of total tax revenue 2018	1.00	15.458[a]	4.612	6.011	24.906
	2.00	23.717[a]	2.090	19.436	27.997
	3.00	32.329[a]	3.719	24.710	39.948
	4.00	28.293[a]	4.549	18.975	37.610

a. Covariates appearing in the model are evaluated at the following values: Number of asylum applications recognized 2018 = 7009,88.

Univariate Tests

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Difference between employment rate native-born and general 2018	Contrast	10.402	3	3.467	1.240	.314	.117
	Error	78.277	28	2.796			
Gross domestic product per capita 2018	Contrast	3.619E+9	3	1.206E+9	3.666	.024	.282
	Error	9.213E+9	28	329050143			
Social spending per capita 2018	Contrast	156175347	3	52058449.1	3.729	.023	.285
	Error	390894632	28	13960522.6			
Tax on personal income as percentage of total tax revenue 2018	Contrast	746.079	3	248.693	3.006	.047	.244
	Error	2316.542	28	82.734			

The F tests the effect of MIPEX overall score 2018 categorized. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

3.3 Syntax MANCOVA Recognized assumptions: Scatterplot

```
SORT CASES  BY Mipex2018recoded.

SPLIT FILE LAYERED BY Mipex2018recoded.

* Chart Builder.

GGRAPH

  /GRAPHDATASET NAME="graphdataset" VARIABLES=EmpDifNatGen2018
GDPcap2018 SocialSpendingCap2018

    TaxIncomeTax2018 Recognized2018 MISSING=LISTWISE REPORTMISSING=NO

  /GRAPHSPEC SOURCE=INLINE
```

```
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  /FRAME OUTER=NO INNER=NO
  /GRIDLINES XAXIS=NO YAXIS=YES
  /STYLE GRADIENT=NO.
BEGIN GPL
  SOURCE: s=userSource(id("graphdataset"))
  DATA: EmpDifNatGen2018=col(source(s), name("EmpDifNatGen2018"))
  DATA: GDPcap2018=col(source(s), name("GDPcap2018"))
  DATA: SocialSpendingCap2018=col(source(s), name("SocialSpendingCap2018"))
  DATA: TaxIncomeTax2018=col(source(s), name("TaxIncomeTax2018"))
  DATA: Recognized2018=col(source(s), name("Recognized2018"))
  GUIDE: axis(dim(1.1), ticks(null()))
  GUIDE: axis(dim(2.1), ticks(null()))
  GUIDE: axis(dim(1), gap(0px))
  GUIDE: axis(dim(2), gap(0px))
  GUIDE: text.title(label("Scatterplot Matrix Difference between employment rate native-born
and ",
    "general 2018,Gross domestic product per capita 2018,Social spending per capita 2018,Tax
on ",
    "personal income as percentage of total tax revenue 2018..."))
  TRANS: EmpDifNatGen2018_label = eval("Difference between employment rate native-
born and "+
    "general 2018")
```

```
  TRANS: GDPcap2018_label = eval("Gross domestic product per capita 2018")

  TRANS: SocialSpendingCap2018_label = eval("Social spending per capita 2018")

  TRANS: TaxIncomeTax2018_label = eval("Tax on personal income as percentage of total
tax "+

    "revenue 2018")

  TRANS: Recognized2018_label = eval("Number of asylum applications recognized 2018")

  ELEMENT:
point(position((EmpDifNatGen2018/EmpDifNatGen2018_label+GDPcap2018/GDPcap2018_
label+


SocialSpendingCap2018/SocialSpendingCap2018_label+TaxIncomeTax2018/TaxIncomeTax2
018_label+


Recognized2018/Recognized2018_label)*(EmpDifNatGen2018/EmpDifNatGen2018_label+

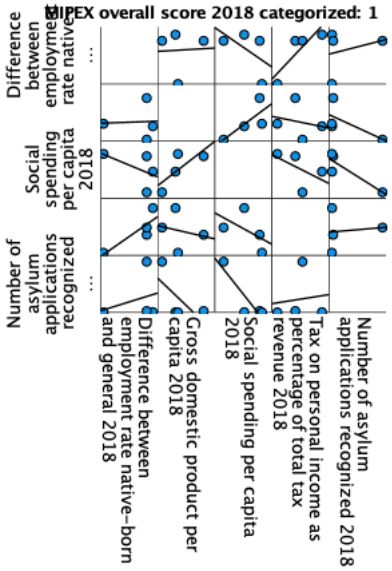

GDPcap2018/GDPcap2018_label+SocialSpendingCap2018/SocialSpendingCap2018_label+

    TaxIncomeTax2018/TaxIncomeTax2018_label+Recognized2018/Recognized2018_label)))

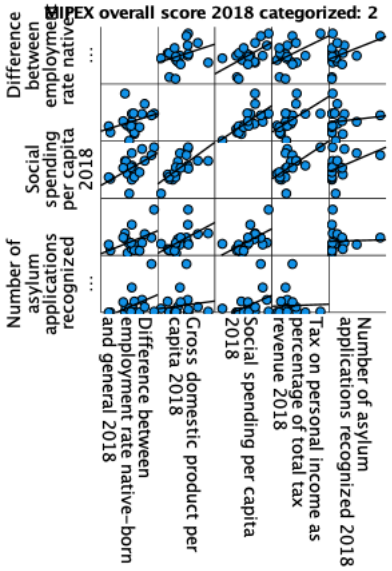
END GPL.
```

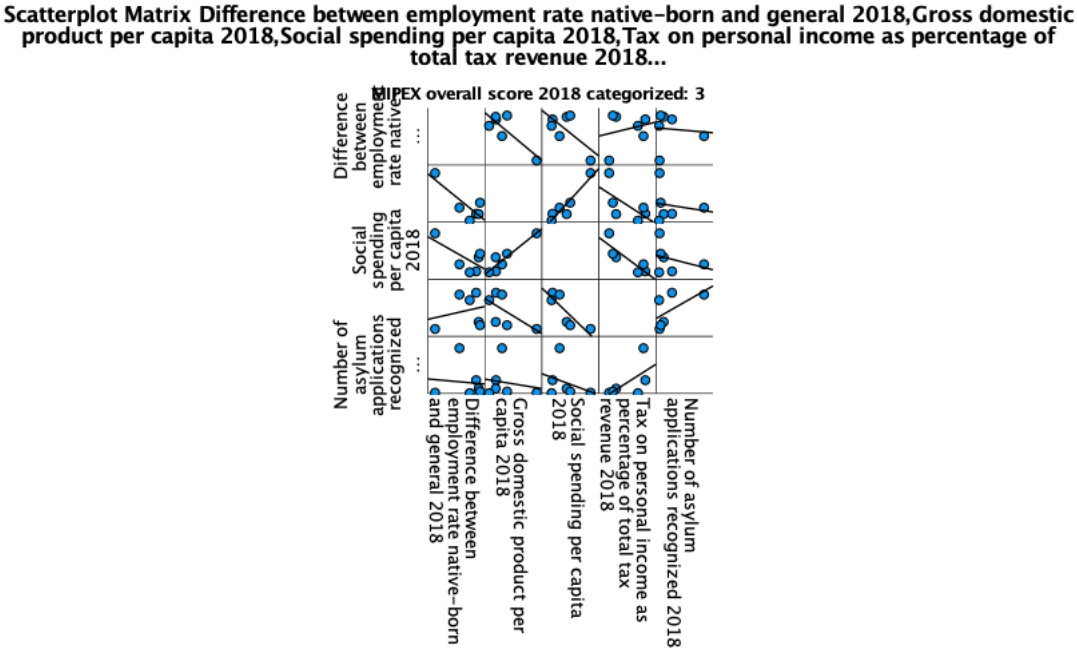
3.4 Output MANCOVA Recognized assumptions: Scatterplot

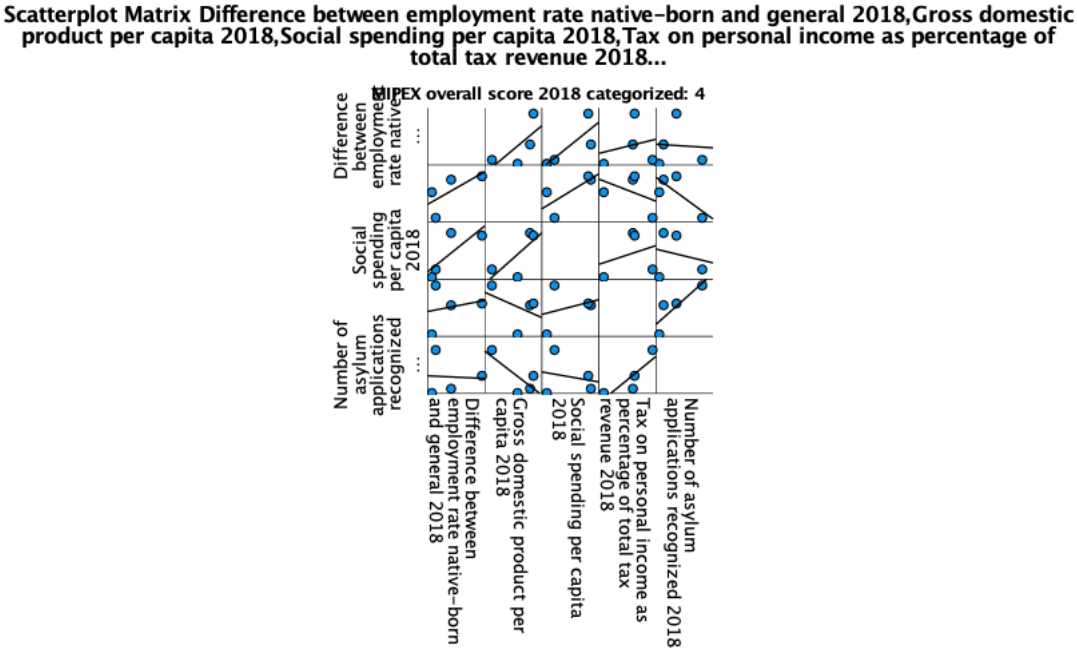
Scatterplot Matrix Difference between employment rate native-born and general 2018,Gross domestic product per capita 2018,Social spending per capita 2018,Tax on personal income as percentage of total tax revenue 2018...



Scatterplot Matrix Difference between employment rate native-born and general 2018,Gross domestic product per capita 2018,Social spending per capita 2018,Tax on personal income as percentage of total tax revenue 2018...







3.5 Syntax MANCOVA Recognized assumptions: Wilks' Lambda interaction term

SPLIT FILE OFF.

GLM EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018 BY Mipex2018recoded WITH

Recognized2018

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/EMMEANS=TABLES(Mipex2018recoded) WITH(Recognized2018=MEAN)

/PRINT=DESCRIPTIVE ETASQ HOMOGENEITY

/CRITERIA=ALPHA(.05)

/DESIGN=Mipex2018recoded Recognized2018 Mipex2018recoded*Recognized2018.

3.6 Output MANCOVA Recognized assumptions: Wilks' Lambda interaction term

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.857	33.015[b]	4.000	22.000	<.001	.857
	Wilks' Lambda	.143	33.015[b]	4.000	22.000	<.001	.857
	Hotelling's Trace	6.003	33.015[b]	4.000	22.000	<.001	.857
	Roy's Largest Root	6.003	33.015[b]	4.000	22.000	<.001	.857
Mipex2018recoded	Pillai's Trace	.494	1.183	12.000	72.000	.312	.165
	Wilks' Lambda	.560	1.194	12.000	58.498	.309	.176
	Hotelling's Trace	.691	1.190	12.000	62.000	.311	.187
	Roy's Largest Root	.523	3.138[c]	4.000	24.000	.033	.343
Recognized2018	Pillai's Trace	.046	.267[b]	4.000	22.000	.896	.046
	Wilks' Lambda	.954	.267[b]	4.000	22.000	.896	.046
	Hotelling's Trace	.048	.267[b]	4.000	22.000	.896	.046
	Roy's Largest Root	.048	.267[b]	4.000	22.000	.896	.046
Mipex2018recoded * Recognized2018	Pillai's Trace	.529	1.284	12.000	72.000	.247	.176
	Wilks' Lambda	.540	1.277	12.000	58.498	.257	.186
	Hotelling's Trace	.723	1.246	12.000	62.000	.274	.194
	Roy's Largest Root	.443	2.655[c]	4.000	24.000	.058	.307

a. Design: Intercept + Mipex2018recoded + Recognized2018 + Mipex2018recoded * Recognized2018

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

3.7 Syntax MANCOVA Recognized assumptions: Mahalanobis distance

SORT CASES BY Mipex2018recoded.

SPLIT FILE LAYERED BY Mipex2018recoded.

REGRESSION

/MISSING LISTWISE

/STATISTICS COEFF OUTS R ANOVA

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT subject_id

/METHOD=ENTER EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018

/SAVE MAHAL.

3.8 Syntax MANCOVA Recognized assumptions: Shapiro-Wilk

EXAMINE VARIABLES=RES_1 RES_2 RES_3 RES_4 BY Mipex2018recoded

/PLOT BOXPLOT HISTOGRAM NPPLOT

/COMPARE GROUPS

/STATISTICS DESCRIPTIVES

/CINTERVAL 95

/MISSING LISTWISE

/NOTOTAL.

3.9 Output MANCOVA Recognized assumptions: Shapiro-Wilk

Tests of Normality

	MIPEX overall score 2018 categorized	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Residual for EmpDifNatGen2018	1.00	.376	4	.	.780	4	.070
	2.00	.128	19	.200*	.964	19	.656
	3.00	.271	6	.190	.851	6	.159
	4.00	.258	4	.	.871	4	.302
Residual for GDPcap2018	1.00	.299	4	.	.920	4	.535
	2.00	.136	19	.200*	.953	19	.437
	3.00	.276	6	.172	.828	6	.103
	4.00	.234	4	.	.886	4	.366
Residual for SocialSpendingCap2018	1.00	.251	4	.	.880	4	.337
	2.00	.111	19	.200*	.977	19	.908
	3.00	.226	6	.200*	.865	6	.206
	4.00	.298	4	.	.790	4	.085
Residual for TaxIncomeTax2018	1.00	.229	4	.	.975	4	.870
	2.00	.217	19	.019	.811	19	.002
	3.00	.255	6	.200*	.861	6	.192
	4.00	.327	4	.	.898	4	.419

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

4. MANCOVA Rejected

4.1 Syntax MANCOVA Rejected

```
GLM EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018 BY Mipex2018recoded WITH
  Rejected2018
 /METHOD=SSTYPE(3)
 /INTERCEPT=INCLUDE
 /SAVE=RESID ZRESID
 /EMMEANS=TABLES(Mipex2018recoded) WITH(Rejected2018=MEAN) COMPARE ADJ(BONFERRONI)
 /PRINT=DESCRIPTIVE ETASQ HOMOGENEITY
 /CRITERIA=ALPHA(.05)
 /DESIGN=Rejected2018 Mipex2018recoded.
```

4.2 Output MANCOVA Rejected

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.895	53.235[b]	4.000	25.000	<.001	.895
	Wilks' Lambda	.105	53.235[b]	4.000	25.000	<.001	.895
	Hotelling's Trace	8.518	53.235[b]	4.000	25.000	<.001	.895
	Roy's Largest Root	8.518	53.235[b]	4.000	25.000	<.001	.895
Rejected2018	Pillai's Trace	.150	1.104[b]	4.000	25.000	.376	.150
	Wilks' Lambda	.850	1.104[b]	4.000	25.000	.376	.150
	Hotelling's Trace	.177	1.104[b]	4.000	25.000	.376	.150
	Roy's Largest Root	.177	1.104[b]	4.000	25.000	.376	.150
Mipex2018recoded	Pillai's Trace	.721	2.137	12.000	81.000	.023	.240
	Wilks' Lambda	.410	2.219	12.000	66.435	.020	.257
	Hotelling's Trace	1.124	2.216	12.000	71.000	.020	.272
	Roy's Largest Root	.670	4.522[c]	4.000	27.000	.006	.401

a. Design: Intercept + Rejected2018 + Mipex2018recoded

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Difference between employment rate native-born and general 2018	13.990[a]	4	3.498	1.252	.312	.152
	Gross domestic product per capita 2018	3.644E+9[b]	4	910924353	2.767	.047	.283
	Social spending per capita 2018	1.953E+8[c]	4	48832872.0	3.597	.017	.339
	Tax on personal income as percentage of total tax revenue 2018	855.211[d]	4	213.803	2.546	.062	.267
Intercept	Difference between employment rate native-born and general 2018	.406	1	.406	.145	.706	.005
	Gross domestic product per capita 2018	4.014E+10	1	4.014E+10	121.941	<.001	.813
	Social spending per capita 2018	1.584E+9	1	1.584E+9	116.636	<.001	.806
	Tax on personal income as percentage of total tax revenue 2018	11850.600	1	11850.600	141.101	<.001	.834
Rejected2018	Difference between employment rate native-born and general 2018	3.376	1	3.376	1.208	.281	.041
	Gross domestic product per capita 2018	3942515.51	1	3942515.51	.012	.914	.000
	Social spending per capita 2018	22938842.7	1	22938842.7	1.690	.204	.057
	Tax on personal income as percentage of total tax revenue 2018	30.643	1	30.643	.365	.551	.013
Mipex2018recoded	Difference between employment rate native-born and general 2018	10.239	3	3.413	1.221	.320	.116
	Gross domestic product per capita 2018	3.565E+9	3	1.188E+9	3.610	.025	.279
	Social spending per capita 2018	156576314	3	52192104.8	3.844	.020	.292
	Tax on personal income as percentage of total tax revenue 2018	780.632	3	260.211	3.098	.043	.249
Error	Difference between employment rate native-born and general 2018	78.246	28	2.794			
	Gross domestic product per capita 2018	9.217E+9	28	329176883			
	Social spending per capita 2018	380153710	28	13576918.2			
	Tax on personal income as percentage of total tax revenue 2018	2351.625	28	83.987			
Total	Difference between employment rate native-born and general 2018	94.530	33				
	Gross domestic product per capita 2018	8.618E+10	33				
	Social spending per capita 2018	3.462E+9	33				
	Tax on personal income as percentage of total tax revenue 2018	23562.720	33				
Corrected Total	Difference between employment rate native-born and general 2018	92.236	32				
	Gross domestic product per capita 2018	1.286E+10	32				
	Social spending per capita 2018	575485198	32				
	Tax on personal income as percentage of total tax revenue 2018	3206.836	32				

a. R Squared = ,152 (Adjusted R Squared = ,030)

b. R Squared = ,283 (Adjusted R Squared = ,181)

c. R Squared = ,339 (Adjusted R Squared = ,245)

d. R Squared = ,267 (Adjusted R Squared = ,162)

Estimates

Dependent Variable	MIPEX overall score 2018 categorized	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Difference between employment rate native-born and general 2018	1.00	-.177[a]	.851	-1.919	1.565
	2.00	.295[a]	.385	-.494	1.085
	3.00	-.409[a]	.683	-1.807	.990
	4.00	1.561[a]	.836	-.152	3.275
Gross domestic product per capita 2018	1.00	31918.081[a]	9231.233	13008.757	50827.404
	2.00	46722.793[a]	4182.365	38155.606	55289.980
	3.00	66143.157[a]	7407.420	50969.745	81316.569
	4.00	35793.294[a]	9078.692	17196.437	54390.152
Social spending per capita 2018	1.00	5183.976[a]	1874.760	1343.704	9024.247
	2.00	8838.639[a]	849.391	7098.739	10578.539
	3.00	12957.808[a]	1504.364	9876.258	16039.358
	4.00	10558.652[a]	1843.781	6781.839	14335.465
Tax on personal income as percentage of total tax revenue 2018	1.00	15.296[a]	4.663	5.745	24.848
	2.00	23.691[a]	2.113	19.364	28.018
	3.00	32.491[a]	3.742	24.827	40.155
	4.00	28.334[a]	4.586	18.941	37.728

a. Covariates appearing in the model are evaluated at the following values: Number of asylum applications rejected 2018 = 16886,64.

Univariate Tests

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Difference between employment rate native-born and general 2018	Contrast	10.239	3	3.413	1.221	.320	.116
	Error	78.246	28	2.794			
Gross domestic product per capita 2018	Contrast	3.565E+9	3	1.188E+9	3.610	.025	.279
	Error	9.217E+9	28	329176883			
Social spending per capita 2018	Contrast	156576314	3	52192104.8	3.844	.020	.292
	Error	380153710	28	13576918.2			
Tax on personal income as percentage of total tax revenue 2018	Contrast	780.632	3	260.211	3.098	.043	.249
	Error	2351.625	28	83.987			

The F tests the effect of MIPEX overall score 2018 categorized. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

4.3 Syntax MANCOVA Rejected assumptions: Scatterplot

```
DATASET ACTIVATE DataSet1.

SAVE OUTFILE='/Users/doxvangerwen/Library/Mobile
Documents/com~apple~CloudDocs/Master '+

   'Thesis/Final version/Data/Dataset 07.06.2023.sav'

 /COMPRESSED.

SORT CASES  BY Mipex2018recoded.

SPLIT FILE LAYERED BY Mipex2018recoded.

* Chart Builder.
```

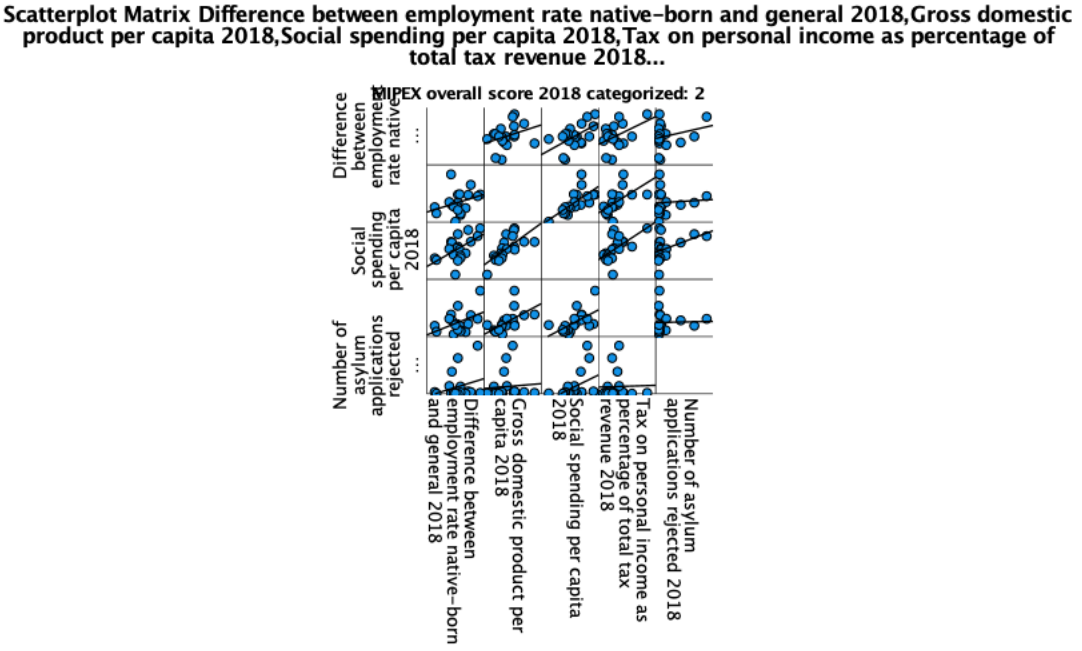
```
GGRAPH
  /GRAPHDATASET NAME="graphdataset" VARIABLES=EmpDifNatGen2018
GDPcap2018 SocialSpendingCap2018
    TaxIncomeTax2018 Rejected2018 MISSING=LISTWISE REPORTMISSING=NO
  /GRAPHSPEC SOURCE=INLINE
  /FITLINE TOTAL=NO.
BEGIN GPL
  SOURCE: s=userSource(id("graphdataset"))
  DATA: EmpDifNatGen2018=col(source(s), name("EmpDifNatGen2018"))
  DATA: GDPcap2018=col(source(s), name("GDPcap2018"))
  DATA: SocialSpendingCap2018=col(source(s), name("SocialSpendingCap2018"))
  DATA: TaxIncomeTax2018=col(source(s), name("TaxIncomeTax2018"))
  DATA: Rejected2018=col(source(s), name("Rejected2018"))
  GUIDE: axis(dim(1.1), ticks(null()))
  GUIDE: axis(dim(2.1), ticks(null()))
  GUIDE: axis(dim(1), gap(0px))
  GUIDE: axis(dim(2), gap(0px))
  GUIDE: text.title(label("Scatterplot Matrix Difference between employment rate native-born
and ",
    "general 2018,Gross domestic product per capita 2018,Social spending per capita 2018,Tax
on ",
    "personal income as percentage of total tax revenue 2018..."))
```

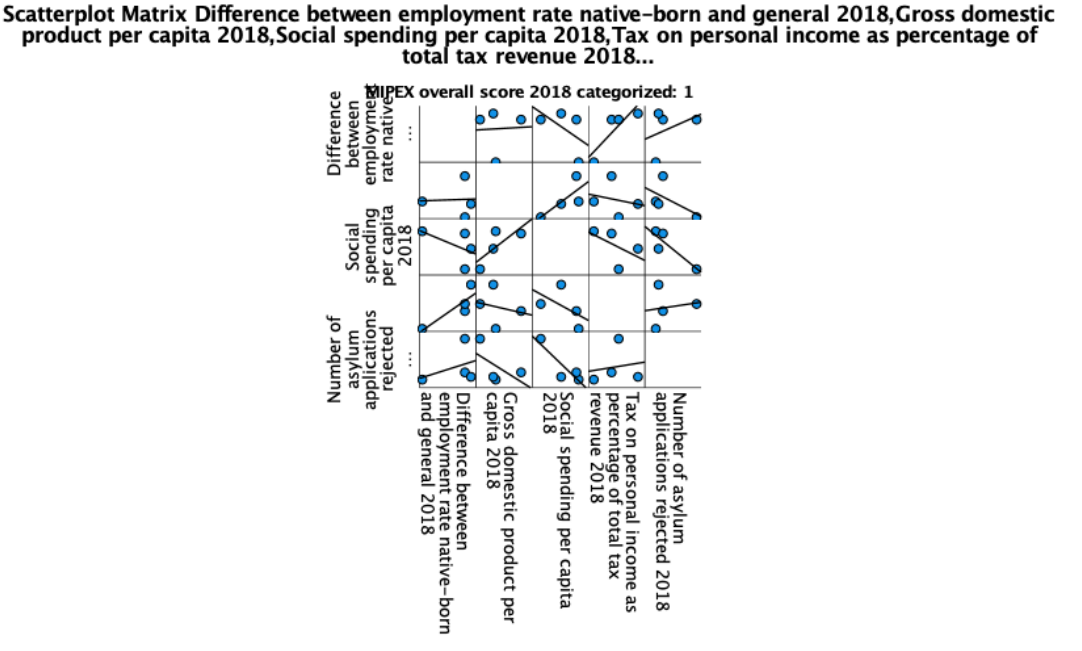
```
  TRANS: EmpDifNatGen2018_label = eval("Difference between employment rate native-
born and "+
    "general 2018")
  TRANS: GDPcap2018_label = eval("Gross domestic product per capita 2018")
  TRANS: SocialSpendingCap2018_label = eval("Social spending per capita 2018")
  TRANS: TaxIncomeTax2018_label = eval("Tax on personal income as percentage of total
tax "+
    "revenue 2018")
  TRANS: Rejected2018_label = eval("Number of asylum applications rejected 2018")
  ELEMENT:
point(position((EmpDifNatGen2018/EmpDifNatGen2018_label+GDPcap2018/GDPcap2018_
label+

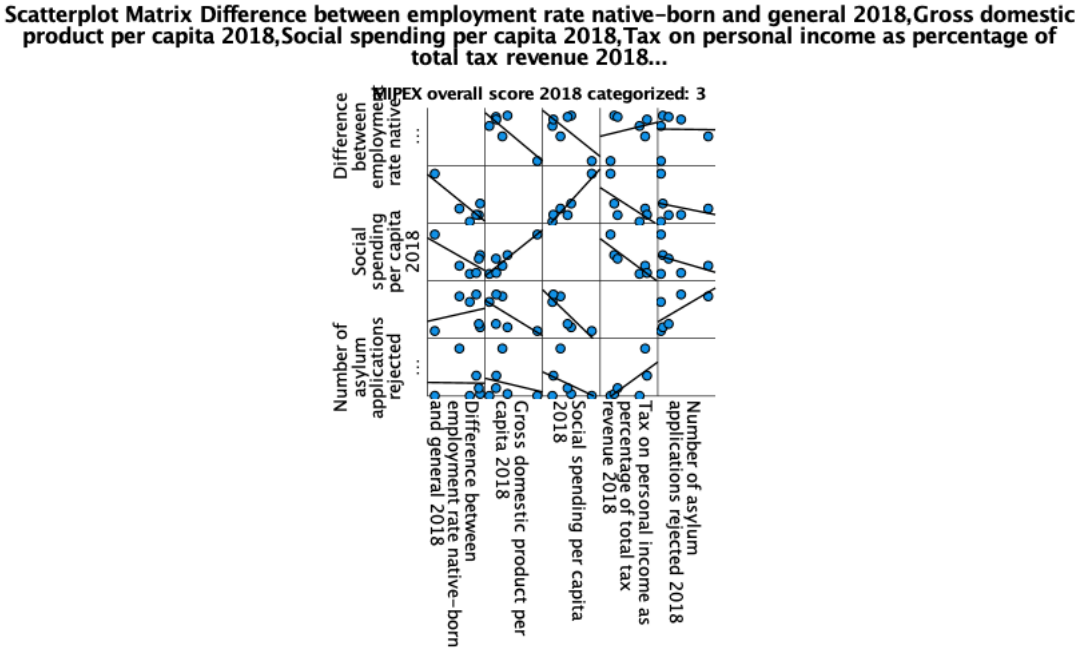
SocialSpendingCap2018/SocialSpendingCap2018_label+TaxIncomeTax2018/TaxIncomeTax2
018_label+
    Rejected2018/Rejected2018_label)*(EmpDifNatGen2018/EmpDifNatGen2018_label+

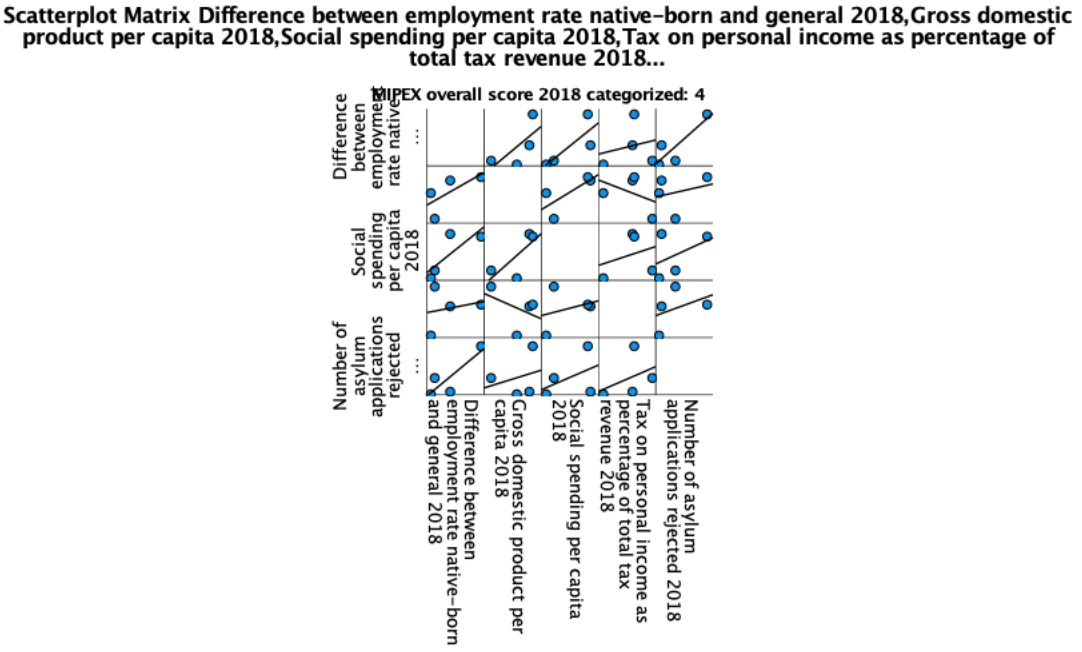
GDPcap2018/GDPcap2018_label+SocialSpendingCap2018/SocialSpendingCap2018_label+
    TaxIncomeTax2018/TaxIncomeTax2018_label+Rejected2018/Rejected2018_label)))
END GPL.
```

4.4 Output MANCOVA Rejected assumptions: Scatterplot









4.5 Syntax MANCOVA Rejected assumptions: Wilks' Lambda interaction term

```
SPLIT FILE OFF.

GLM EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018 BY
Mipex2018recoded WITH

   Rejected2018

 /METHOD=SSTYPE(3)
```

/INTERCEPT=INCLUDE

/CRITERIA=ALPHA(.05)

/DESIGN=Mipex2018recoded Rejected2018 Mipex2018recoded*Rejected2018.

4.6 Output MANCOVA Rejected assumptions: Wilks' Lambda interaction term

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.827	26.310[b]	4.000	22.000	<.001
	Wilks' Lambda	.173	26.310[b]	4.000	22.000	<.001
	Hotelling's Trace	4.784	26.310[b]	4.000	22.000	<.001
	Roy's Largest Root	4.784	26.310[b]	4.000	22.000	<.001
Mipex2018recoded	Pillai's Trace	.549	1.345	12.000	72.000	.213
	Wilks' Lambda	.531	1.318	12.000	58.498	.233
	Hotelling's Trace	.738	1.271	12.000	62.000	.259
	Roy's Largest Root	.446	2.675[c]	4.000	24.000	.056
Rejected2018	Pillai's Trace	.020	.114[b]	4.000	22.000	.976
	Wilks' Lambda	.980	.114[b]	4.000	22.000	.976
	Hotelling's Trace	.021	.114[b]	4.000	22.000	.976
	Roy's Largest Root	.021	.114[b]	4.000	22.000	.976
Mipex2018recoded * Rejected2018	Pillai's Trace	.359	.814	12.000	72.000	.635
	Wilks' Lambda	.667	.805	12.000	58.498	.644
	Hotelling's Trace	.459	.791	12.000	62.000	.657
	Roy's Largest Root	.350	2.101[c]	4.000	24.000	.112

a. Design: Intercept + Mipex2018recoded + Rejected2018 + Mipex2018recoded * Rejected2018

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

4.7 Syntax MANCOVA Rejected assumptions: Mahalanobis distance

SORT CASES BY Mipex2018recoded.

SPLIT FILE LAYERED BY Mipex2018recoded.

REGRESSION

/MISSING LISTWISE

/STATISTICS COEFF OUTS R ANOVA

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT subject_id

/METHOD=ENTER EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018

/SAVE MAHAL.

4.8 Syntax MANCOVA Rejected assumptions: Shapiro-Wilk

EXAMINE VARIABLES=RES_5 RES_6 RES_7 RES_8 BY Mipex2018recoded

/PLOT BOXPLOT HISTOGRAM NPPLOT

/COMPARE GROUPS

/STATISTICS DESCRIPTIVES

/CINTERVAL 95

/MISSING LISTWISE

/NOTOTAL.

4.9 Output MANCOVA Rejected assumptions: Shapiro-Wilk

Tests of Normality

	MIPEX overall score 2018 categorized	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Residual for EmpDifNatGen2018	1.00	.407	4	.	.738	4	.030
	2.00	.105	19	.200*	.978	19	.919
	3.00	.266	6	.200*	.850	6	.158
	4.00	.255	4	.	.877	4	.327
Residual for GDPcap2018	1.00	.292	4	.	.928	4	.585
	2.00	.127	19	.200*	.953	19	.447
	3.00	.269	6	.199	.816	6	.082
	4.00	.238	4	.	.876	4	.320
Residual for SocialSpendingCap2018	1.00	.256	4	.	.891	4	.389
	2.00	.119	19	.200*	.960	19	.574
	3.00	.219	6	.200*	.874	6	.244
	4.00	.266	4	.	.881	4	.345
Residual for TaxIncomeTax2018	1.00	.182	4	.	.993	4	.973
	2.00	.216	19	.019	.824	19	.003
	3.00	.272	6	.187	.832	6	.111
	4.00	.280	4	.	.942	4	.665

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

5 MANOVA discriminant analysis

5.1 Syntax MANOVA discriminant analysis

```
DISCRIMINANT
  /GROUPS=Mipex2018recoded(1 4)
  /VARIABLES=EmpDifNatGen2018 GDPcap2018 SocialSpendingCap2018 TaxIncomeTax2018
  /ANALYSIS ALL
  /SAVE=SCORES
  /PRIORS EQUAL
  /STATISTICS=RAW GCOV TABLE
  /PLOT=COMBINED
  /CLASSIFY=NONMISSING POOLED.
```

5.2 Output MANOVA discriminant analysis

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.685[a]	62.9	62.9	.638
2	.384[a]	35.3	98.1	.527
3	.020[a]	1.9	100.0	.142

a. First 3 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 3	.420	24.285	12	.019
2 through 3	.708	9.673	6	.139
3	.980	.568	2	.753

Standardized Canonical Discriminant Function Coefficients

	Function		
	1	2	3
Difference between employment rate native-born and general 2018	-.280	.360	1.000
Gross domestic product per capita 2018	-.049	-1.387	.927
Social spending per capita 2018	.706	1.144	-.486
Tax on personal income as percentage of total tax revenue 2018	.671	.001	-.289

Functions at Group Centroids

MIPEX overall score 2018 categorized	Function 1	2	3
1.00	-1.474	-.351	-.243
2.00	-.164	-.081	.110
3.00	1.313	-.509	-.125
4.00	.282	1.498	-.093

Unstandardized canonical discriminant functions evaluated at group means