Post-Industrialisation, Job Opportunities and Ethnocentrism

A comparison of 22 Dutch Urban Economies

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Abstract:

In this article we assess the consequences of the transition to post-industrial urban economy for labour demand and ethnocentrism in the 22 Dutch urban agglomerations. Using municipal-level data as well as surveys, we show that the labour market of the least post-industrial cities yields low labour demand for lower-educated urbanites (upgrading/professionalisation thesis), while the labour market of the most post-industrial cities yields high labour demand for lower-educated urbanites (polarisation thesis). It is furthermore found that lower-educated natives in the former are more ethnocentric than in the latter. However, contrary to what is often claimed in urban studies and the social sciences at large, this proves not to be driven by job scarcity in the least post-industrial cities. The article concludes with suggestions on what might be responsible for this finding.

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1. Introduction

In Western European countries anti-foreigner sentiments have increased substantially (Semyonov et al., 2008), and immigration has become highly politicised (Achterberg, 2006a, 2006b; Ignazi, 2003; Van der Waal and Achterberg, 2007) in recent decades. One manifestation of the increased expression of ethnocentrism is the fact that in recent decades in many of these countries policies have been formulated both to curb migration from economically less-advanced countries and to compel foreigners already in residence to 'integrate' rapidly into mainstream society (Baldwin-Edwards and Schain, 1994). It must be stressed that ethnocentrism has emerged especially vis-à-vis low-skilled foreigners of non-western origin and not as much toward high-skilled migrants. This latter category is in general conceived of as consisting of 'knowledge-workers' and members of the 'creative class' whose presence – often as temporary 'ex-pats' – is not considered problematic, but as a marker of the vitality of the national economy.

Research on ethnocentrism shows that both individual and contextual characteristics account for different levels of ethnocentrism among the native population (Semyonov et al. 2008). When it comes to individual-level characteristics, ethnocentrism is more pronounced among the socio-economically vulnerable, especially the less educated and the unemployed, who according to Semyonov et al. (2008, p. 21), tend to be threatened by competition from out-group populations. When it comes to country-level

characteristics, the level of ethnocentrism is negatively correlated with national prosperity. Both findings suggest a socio-economic logic spurring ethnocentrism as argued in the ethnic competition theory (Olzak, 1992), so that in order to understand the economic roots of ethnocentrism, one has to differentiate between individual differences and contextual differences related to economic opportunities. And indeed, this is the common research practice in dealing with ethnocentrism: distinguishing between the individual and the national levels by comparing feelings of ethnocentrism between subcategories of the native population that vary in terms of economic vulnerability, and between countries that vary in the extent to which they provide economic opportunities for their populations. But this established research practice, we would argue, leaves out an essential contextual variable. There are – and maybe even increasingly so (Dangschat 1994; Van der Waal, 2010) – substantial economic differences among cities within the same national institutional context when it comes to competition over scarce resources, such as jobs.

In the Netherlands, where the overwhelming majority of the immigrants are of low socio-economic status (Van Ours & Veenman, 2003), immigration has become highly politicised in recent decades as well, but the extent to which this manifests itself differs substantially among cities. In recent elections, for instance, the share of voters for anti-immigration parties was considerably higher in Rotterdam – the Netherlands' second city – than in Amsterdam (http://www.nlverkiezingen.com/). So although in terms of voting behaviour there is definitely a national trend towards more ethnocentrism, there is also a substantial difference in this respect between the two main Dutch cities, which are only 60 km's apart. From an urban studies perspective, the occurrence of these

differences in politically articulated ethnocentrism can be related to one of the major topics of discussion in recent years: the labour-market structure of contemporary cities. Basically, there are two conflicting, or at least competing, theories on the development of urban labour markets. In line with the alleged economic roots of ethnocentrism outlined above, these are likely to be consequential for the level of ethnocentrism of urban populations, for their crucial difference concerns the extent to which economically-vulnerable urbanites can find employment.

One theory argues that urban labour markets in advanced economies are in a process of upgrading, also referred to as professionalisation, in which low-skilled workers are faced with decreasing job opportunities. While there is growth at the upper end of the labour market, the lower-skilled fall victim to the disappearance of jobs at the lower end of the urban labour market (Hamnett, 2004; Wilson, 1996). The second theory holds that contemporary urban economies are not so much characterised by upgrading, but, rather, by polarising labour markets. It is argued that growth sectors such as finance, consultancy, legal services, and personal services not only create professional jobs which demand highly-skilled workers, but also spawn jobs at the bottom of the labour market (Sassen, 1991, 2001, 2006a). Therefore, although cities may experience vast immigration from economically less advanced countries, their labour markets can still absorb those low-skilled labourers.

These two theoretical positions may offer the explanation for differences among Dutch cities when it comes to expressions of ethnocentrism. Previous studies on the labour market of Amsterdam and Rotterdam point in this direction. Comparisons of the labour markets of Amsterdam and Rotterdam showed that the former polarises while the

latter upgrades. The explanation for this difference is that Amsterdam's economy is much more post-industrial than Rotterdam's (Burgers & Musterd 2002, Van der Waal & Burgers 2009). As a consequence the former yields more job opportunities for the low skilled than the latter, first, because, in accordance with the theoretical logic of the polarisation thesis, the higher share of advanced producer services in Amsterdam leads to higher labour demand for lower-skilled urbanites (Burgers and Musterd, 2002), and, second, because the higher share of industry in Rotterdam leads to lower demand for lower-skilled urbanites due to exposure to international competition (Van der Waal and Burgers, 2009). As a result, there is more competition over jobs at the bottom of the labour market between immigrants and natives in Rotterdam compared to Amsterdam (Van der Waal, 2009, 2010). This suggests that the higher level of ethnocentrism in Rotterdam compared to Amsterdam as manifested in voting behaviour outlined above – or between Dutch cities in general – can be explained by differences in terms of the extent to which their economies are post-industrial and, consequently, to the resulting differences in job opportunities.

In short, several research findings suggest that, in accordance with the theoretical logic of the polarisation thesis, in Dutch cities that are the most post-industrial, labour demand for lower-skilled urbanites is relatively high. For the Dutch cities which are the least post-industrial in character, on the other hand, these findings suggest that labour demand will be low. As a consequence, competition over jobs at the bottom of the labour market between natives and immigrants is most fierce in the least post-industrial cities. According to the argument that competition over scarce resources between immigrants and natives spawns the ethnocentrism of the latter (Semyonov et al., 2008; see also

Olzak, 1992), it can therefore be expected that economically vulnerable natives in the least post-industrial cities will be more ethnocentric than in the most post-industrial cities.

In this paper we will assess whether there is indeed less ethnocentrism in Dutch post-industrial cities than in their traditional industrial counterparts , and if so, whether this is caused by a greater availability of low-skill jobs in their local economies as asserted in the ethnic competition theory.

2. Post-industrialisation, job opportunities and ethnocentrism in ` contemporary cities: the upgrading and polarisation theses

Although both the rise of post-industrialism in cities in the advanced economies and the influx of migrants in those cities have been documented almost beyond the point of boredom, it is not at all clear what the social consequences of these two processes are. Basically, there are two theoretical positions. The first one is that contemporary urban economies increasingly exclude low-skilled workers due to the transition to a post-industrial economy. This upgrading or professionalisation (Hamnett, 1994) theory argues that there is a 'mismatch' between labour demand and labour supply at the bottom of urban labour markets: low-skilled workers living in cities are not qualified for an advanced service economy and lose their jobs or, if already unemployed, cannot easily find a new one. In line with the theory that stresses the economic roots of ethnocentrism, the proponents of this theoretical logic often expect that the transition to a post-industrial

economy therefore spawns ethnocentrism among economically vulnerable native urbanites.

In their introductory chapter of the edited volume *Dual City: Restructuring New York*, Mollenkopf and Castells (1991) refer to New York's 'Commission on the year 2000', which emphasised that contrary to the past, poor people lack the opportunities for upward social mobility. As a result, the economically vulnerable fall victim to a rigid cycle of poverty and a permanent underclass formation, divorced from the rest of society (Mollenkopf and Castells, 1991, p. 4). Summarising the results of the empirical studies in their book, the authors more or less conclude the same: due to the transition to a post-industrial economy New York has become a dual city, where much of the working-age population, and above all the minority youth, is outside of the formal labour market (Mollenkopf and Castells, 1991, p. 414).

Similar arguments can be found in Wilson's work on the jobless ghetto in American inner cities (1978, 1987, 1996). Wilson adds that not only do minority groups – in his work African-Americans in particular – fall victim to a labour-market mismatch, but also low-skilled whites, leading to local political conflicts which are articulated along ethnic lines. Decreasing job opportunities in manufacturing, wholesale, and retail industries in the central city create problems for both lower-class whites and blacks. But notwithstanding the fact that both black and white suffer from this structural economic trend, the economically vulnerable are nonetheless prone to racial antagonism (Wilson, 1978, p. 140-1). In his anthropological study on the 'new poor' in Chicago, Wilson (1996) again stresses the possibility of ethnic conflict based on economic disadvantage, as he argues that especially during economic hard times people become more receptive to

ideological messages that deflect attention from the causes of the problems those people face: “Instead of associating their problems with economic and political changes, these divisive messages encourage them to turn to each other – race against race.” (Wilson, 1996, p. 192-3, see also Fainstein et al., 1992, p. 263).

By the mid 1980s, Kasarda and Friedrichs argued that the problem of ‘mismatch’ and its consequences in terms of labour-market opportunities for the economically vulnerable had manifested themselves not only in the United States, but also in European cities. They claim that the main problem of the transformation of cities from centers of production and distribution of material goods to centers of administration, finance, and services is that the decline in blue-collar jobs cannot sustain lesser-educated ethnic and racial minorities any longer (Kasarda and Friedrichs, 1986, p. 225). Although he sees substantial differences from their counterparts in the United States, Wacquant therefore recently argued that the loss of jobs due to the transition to a post-industrial economy in combination with the spatial propinquity of immigrants and natives in European cities gives rise to what he calls ‘ethnonational exclusivism’. He claims that the individual and collective downward mobility of families of the autochthonous working class is experienced as intolerable in the light of advances of what are perceived of as ‘rival’ populations of foreign origin (Wacquant, 2008, p. 276). In sum, several authors suggest that the transition from an industrial to a post-industrial urban economy diminishes opportunities at the bottom of urban labour markets. As this will lead to competition over job opportunities between natives and immigrants, they expect that these declining economic opportunities cause racial or ethnic hostility towards immigrant and minority groups among autochthonous workers.

The second theoretical position is rather different in nature, and to be found in the literature on 'world' or 'global' city formation, more in particular in the work of Friedmann (1986, see also Friedmann and Goetz, 1982) and Sassen (1991, 2001, 2006a). The central argument here is that the transition to a post-industrial economy does not lead to upgrading and a subsequent mismatch between labour demand and labour supply at the bottom of urban labour markets, but to polarisation. The title of the chapter in the first edition of *The Global City* (Sassen, 1991) addressing this process is quite clear on this matter: *Economic Restructuring as Class and Spatial Polarisation*, and the mechanisms suggested in this chapter are still considered empirically valid (Sassen, 2006a).

It is argued that the clustering of advanced producer services such as finance, consultancy, and accountancy, often labeled as 'growth sectors' is the primary driving force for urban economic growth from the 1980s onwards (Sassen 2006a, p. 173-5). According to Sassen (1991, p. 332-3), this clustering leads to a polarisation of the occupational hierarchy, for these growth industries do not only create a vast demand for the high skilled, but also for the low-skilled: "the group of service industries that were one of the driving economic forces beginning in the 1980s [the advanced producer services], and continue as such today, is characterised by greater (…) *occupational dispersion*, weak unions, and a *growing share of casualized low-wage jobs*" (Sassen, 2006a, p. 173; emphasis added). According to Sassen's polarisation thesis there are two mechanisms as to why the occupational hierarchy in global cities is dispersed, that is polarised, due to the clustering of advanced producer services.

The first mechanism is often referred to as a direct effect because it concerns employment in the advanced producer services firms and in firms that cater to these

services: “almost half the jobs in the producer services are lower-income jobs, and the other half are in the two highest earning classes” (Sassen, 2006a, p. 197, see also 2000, p. 142). The latter are the well-educated professionals that perform the complex operations such as financial specialists, accountants and consultants, the former are low-educated facilitators such as cleaners, clerks and security officers (Sassen, 2000, p. 142, 2006a, p. 197). A growing share of advanced producer services in cities therefore leads to an increase of labour demand at both the top and the bottom of the occupational hierarchy. The second mechanism is often referred to as an indirect effect, or ‘multiplier effect’ (Burgers and Musterd 2002, p. 409), as it is driven by the consumption pattern and life-styles of the well-educated professionals employed in the advanced producer services. This pattern is supposed to yield demand for “an army of low-wage workers (…) including residential building attendants, dog-walkers, housekeepers for the two-career family, workers in the gourmet restaurants and food shops, French hand laundries, and so on” (Sassen-Koob 1985, p. 262, see also Friedmann 1986; Sassen 1991, 2001, 2006a).

It is important to note that although the polarisation thesis has been formulated for ‘world’ or ‘global’ cities, most authors on those cities implicitly or explicitly argue that its theoretical notions are an apt heuristic device for assessing the urban social consequences of the rise of post-industrialism more in general (Friedmann and Goetz, 1982, p. 313; Friedmann, 1995, p. 22; Sassen, 2006b, p. x), because comparable developments exist in cities that operate on smaller geographical scales and at lower levels of complexity than global cities (Sassen, 2006a, p. 193; see also Friedmann and Goetz, 1982, p. 319-20; Sassen, 2000, p. 139). That is why it has become an established research practice in urban studies to analyse the transition to a post-industrial economy in

all cities according to the polarisation thesis in the global city debate (see for a comprehensive overview Van der Waal, 2010).

In sum, contrary to the upgrading thesis, which asserts that the transition to a post-industrial economy leads to a mismatch between supply and demand at the bottom of the labour market, the polarisation thesis asserts that this transition leads to polarisation, which manifests itself as high labour demand for both high-skilled *and* low-skilled urbanites. As a consequence, it is not very likely that the transition to a post-industrial economy will spawn ethnocentrism among economically vulnerable natives due to declining job opportunities. Yet, at least for the Dutch case the upgrading and polarisation theses might be much less irreconcilable than is often presumed. Several research findings on the cities of Amsterdam and Rotterdam point in the direction that polarisation and upgrading both occur. They do so in different cities, and as a result there is competition between immigrants and natives at the bottom of the labour market in some cities – the ones with upgrading labour markets – while in other cities – the ones with the polarising labour markets – there is no such competition.

In a comparison of Amsterdam and Rotterdam, Burgers and Musterd (2002) found that in the former the transition to a post-industrial economy leads to high labour demand for both the higher educated and the lower educated. In Rotterdam, on the other hand, this merely leads to high labour demand for the higher educated. According to Burgers and Musterd (2002), this finding is responsible for the fact that the unemployment level of lower-educated urbanites in Rotterdam is substantially higher than in Amsterdam. “Sassen’s polarisation model seems to be more powerful in explaining inequality in Amsterdam while the mismatch scheme (…) seems more

adequate for Rotterdam" (Burger and Musterd, 2002, p. 409) is consequently interpreted according to the theoretical rationale of the polarisation thesis. It is suggested that the higher share of professionals in advanced producer services in Amsterdam in comparison to Rotterdam is what drives the higher labour demand for low-skilled service workers in the former as opposed to the latter: "As Sassen has suggested, the presence of the new middle class — itself largely the result of an expanding service sector — in turn creates additional employment in the service sector, mainly in those parts which cater for the lifestyles of these urban professionals: restaurants, specialty shops, cultural industries and so forth" (Burgers and Musterd, 2002, p. 409).

Recently, Van der Waal and Burgers (2009) have shown that Rotterdam experiences stronger upgrading tendencies than Amsterdam because the former is less post-industrial than the latter. As Rotterdam has a higher share of employment in industry, its labour market is more strongly exposed to international competition than that of Amsterdam, and this exposure leads to declining labour demand for low-skilled urbanites. The findings of Burgers and Musterd (2002) and Van der Waal and Burgers (2009), in short, suggest that the transition to a post-industrial economy can lead to both upgrading and polarisation of urban labour markets, albeit in different cities. They point in the direction that the most post-industrial urban economies will experience polarisation due to the high share of employment in the advanced producer services, while the least post-industrial urban labour markets will experience upgrading due to exposure to international competition.

If so, only in the least post-industrial cities there will be competition over jobs between natives and immigrants at the bottom of the labour market – which has already

been corroborated in a comparison between Amsterdam and Rotterdam (Van der Waal, 2009). On the basis of the ethnic competition theory it can consequently be expected that the economically vulnerable native population in the least post-industrial cities is more ethnocentric than in the most post-industrial cities because of the lower labour market opportunities in the former than in the latter.

In what follows we will therefore first assess whether indeed, *the most post-industrial Dutch cities yield higher labour demand at the bottom of the labour market than the least post-industrial Dutch cities* (hypothesis 1). If this expectation is confirmed, on the basis of the ethnic competition theory it can be expected that *economically vulnerable natives in the most post-industrial Dutch cities are less ethnocentric than economically vulnerable natives in the least post-industrial Dutch cities* (hypothesis 2), and that *the lower level of ethnocentrism of economically vulnerable natives in the most post-industrial Dutch cities is related to the fact that these cities have more job opportunities at the lower end of the labour market compared to the least post-industrial Dutch cities* (hypothesis 3).

3. Data and Operationalisation

As we will compare cities within one institutional framework, the Netherlands, we control for the impact of national welfare and labour-market policies that are highly influential on the social consequences of post-industrialism (Burgers and Musterd, 2002; Hamnett, 1996; Vaattovaara and Kortteinen, 2003). The Dutch case is also ideal for assessing market-driven differences between urban labour markets since its welfare state

is rather centralistic in comparison to other European countries (Burgers and Musterd, 2002; Davies, 1989; Musterd et al., 1998; Newman and Thornley, 1996; Parkinson et al., 1988). This minimises the probability that labour market differences among Dutch cities are driven by state intervention. The Netherlands is a very open and highly developed economy, with urban economies that differ substantially in the extent to which they are post-industrial (Van der Waal, 2010) – a necessary condition for the assessment at hand.

We will test our hypothesis on the 22 Dutch metropolitan agglomerations as defined by *Statistics Netherlands* (Centraal Bureau voor de Statistiek, CBS). To test hypothesis 1, which reads that the most post-industrial Dutch cities yield higher labour demand at the bottom of the labour market than the least post-industrial Dutch cities, we constructed our own dataset with city-level data that were retrieved via the *Statline* service of *Statistics Netherlands* (Centraal Bureau voor de Statisitiek, CBS). The data set contains information on employment shares by industry, the population, and the unemployment level of the lower educated for these agglomerations.[1] We used data on the maximum number of years for the 22 urban agglomerations that could be retrieved (1996-2007). By using data for such a long period, we can assess the structural effect of the type of urban economy, because it will control for vicissitudes in the general economic climate, i.e. downward and upward economic trends.

The dependent variable in the first analysis is *unemployment lower educated*. It measures the percentage of the lower-educated working population that is currently unemployed, but is looking for a job for at least 12 hours a week – the standard Dutch definition of unemployment. It is measured with a two-year time lag, as the unemployment effects of structural changes in the economy will not show themselves

immediately. As a consequence, the data range of *unemployment lower educated* is from 1998-2007 instead of 1996-2007 (see table A1 in the appendix for the averages and standard deviations of *unemployment lower educated* between 1998 and 2008).

The independent variable, *service economy*, is measured as the gap between the share of employment in the advanced producer services and the share of employment in industry (producer services minus industry). As such, a higher score indicates a more post-industrial economy, or, put differently, an urban economy that according to the polarisation thesis will most strongly polarise, and according to the upgrading thesis will most strongly upgrade. The share of employment in the manufacturing industry concerns the share of the working population that is employed in firms classified in class D in the Dutch SBI 93 classification (*Standaard Bedrijfsindeling 1993*) that corresponds to the 'ISIC Rev. 3.1' (International Standard Industrial Classification of All Economic Activities) of the United Nations. The share of employment in the advanced producer services concerns the share of the working population that is employed in firms classified in class J (finance), and class K (real estate and producer services) in the Dutch SBI 93 classification (data range of *service economy*: 1996 – 2005).

The analysis of the extent to which a city is post-industrial impacts the unemployment level of lower-educated urbanites will use the following control variables:

Age 15-24 / 25-34 / 35-44 / 45-54 – are four variables that measure the share of the working population by age category. These are used in order to control for non-labour-market-driven settlement patterns, such as the high share of students in university cities (data range 1996 – 2005).

Share lower educated – measures the share in the working population that is less educated. It is used to control for non-market-driven settlement patterns. The share of cheap subsidised housing, for instance, differs by city and is likely to be highly related to the share of lower-educated urbanites in the population (data range 1996 – 2005).

Working population – measures the total number of urbanites between the age of 15 and 66 and indicates the total working population (data range 1996 – 2005).

For the analyses of the impact of the extent to which cities are post-industrial and of economic vulnerability on the level of ethnocentrism of the native population (hypotheses 2 and 3), we used *Cultural Change in the Netherlands* (Culturele Veranderingen in Nederland). This bi-annual survey is a sample that is representative for the Dutch population at large and is conducted by *The Netherlands Institute for Social Research* (Sociaal Cultureel Planbureau, SCP).[2] From this sample we selected the autochthonous Dutch between 18 and 65 years old (working population) living in the 22 Dutch metropolitan agglomerations. The 2004 and 2006 waves of *Cultural Change in the Netherlands* were combined to yield a substantial number of respondents (N = 922). Previous waves could not be used, as these do not allow selecting the autochthonous population.

The dependent variable is e*thnocentrism.* It is an adequate scale constructed out of four items on the opinion of the respondents towards immigrants and immigration. Three of these items revolve around the question of who is considered most entitled to scarce economic resources according to the respondent (a foreigner or a native Dutchman). One item asks the respondent's opinion on the number of people without Dutch nationality in

the Netherlands (see table 1 for the scale specifications and exact formulation of the questions). With these items *ethnocentrism* is measured as closely as possible to the theoretical rationale of the ethnic competition theory, the empirical validity of which is to be assessed here. A higher score on *ethnocentrism* indicates a higher level of ethnocentrism.

There are three individual-level independent variables that measure the economic position – and therefore indicate the extent of economic vulnerability – of the respondents:

Education – measures the number of years of education of the respondent after the age of six.

Income – is measured as the net family income of the respondent.

Unemployed – codes the employed respondents as 1, and the unemployed respondents as 2.

We added two city-level variables to the dataset used for testing hypothesis 2 and 3: *service economy* and *opportunity structure*. The former concerns the 2004 scores of *service economy*, the latter the inverted 2004 scores of *unemployment lower educated*.

Table 1. Items of ethnocentrism

Items	*Factor loadings*
Suppose there are two employees that differ in one respect, but are equal in all others. If only one of them can be considered for promotion, who should it be? [a foreigner / should not matter / a Dutchman]	0.766
Suppose there are two employees that differ in one respect, but are equal in all others. If one of them needs to be dismissed because of economic reasons, who should it be? [a Dutchman / should not matter / a foreigner]	0.547
We would like to know who you consider most entitled to a house in time of shortage of housing. [foreign family / should not matter / a Dutch family]	0.783
What do you think in general of the number of people with another nationality living in our country? [too many / many, but not too many / not too many]	0.651
R^2	48.06
Cronbach's α	0.63
N	922

Source: *Cultural Change in the Netherlands* 2004 and 2006 surveys

4. Post-industrialisation, job-opportunities and ethnocentrism assessed

As the data used to test hypothesis 1 have a multilevel structure, 11 years within 22 cities, there is need for multilevel modelling (Hox ,1995). Therefore table 2 starts with a null model, which shows how much variation of *unemployment lower educated* exists at the level of metropolitan agglomerations, and how much of this variation exists at the level of years. It shows that 21.2 percent (0.211 / (0.785 + 0.211)) of the variation in the

unemployment level of the lower educated is related to differences among urban economies, while 78.8 percent (0.785 / (0.785 + 0.211)) of this variation is caused by fluctuations in time – probably the result of the economic boom of the second half of the 1990s and the economic bust after 2001 (see also table A1 in the appendix).

Table 2. Multilevel regression analysis: dependent variable is *unemployment lower educated* in 22 Dutch metropolitan agglomerations from 1998 through 2007 (method: maximum likelihood, entries are regression coefficients and standard errors; *N* = 220 (22 cities * 11 years)).

	Null model		*Model 1*	
Independents	*β*	*S.E.*	*β*	*S.E.*
Constant	-0.00	(0.113)	0.000	(0.112)
Service economy			-0.299**	(0.128)
Controls				
Working population			0.228*	(0.127)
Share lower educated			-0.195**	(0.097)
Age 15-24			0.108	(0.121)
Age 25-34			-0.041	(0.090)
Age 35-44			0.041	(0.092)
Age 45-54			-0.135	(0.105)
Variance metropolitan level	0.211**	(0.085)	0.208*	(0.114)
Variance year level	0.785****	(0.075)	0.740****	(0.074)
Deviance	658.46		624.78	

Notes: *$p < 0.10$; ** $p < 0.05$; *** $p < 0.01$; ****$p < 0.001$. Analyses of own dataset computed with data retrieved from *Statline* service, *Statistics Netherlands* (*CBS*).

Model 1 entered the variable *service economy* to find out whether the most post-industrial cities have the lowest share of unemployment among their lower-educated citizens as argued in the polarisation thesis. The findings of Burgers and Musterd (2002) and Van der Waal and Burgers (2009) that the strong post-industrial character of Amsterdam leads to high labour demand for lower-educated urbanites (polarisation), while the more industrial character of Rotterdam leads to low labour demand for lower-educated urbanites (upgrading) already pointed in that direction. The negative and significant coefficient of *service economy* indicates this is exactly what is happening in Dutch cities in general indeed, and thus corroborates hypothesis 1.[3]

In Dutch cities, then, both polarisation and professionalisation occur, the former in the most post-industrial urban economies, the latter in the least post-industrial urban economies. If ethnocentrism is indeed rooted in economic vulnerability and the competition with immigrants over scarce economic resources that goes along with it, it can therefore be expected that the population – especially the economically most vulnerable, that is the lower educated, the poor, and the unemployed – in the least post-industrial cities will be more ethnocentric than in the most post-industrial cities (hypothesis 2) – because there are fewer job opportunities in the least post-industrial cities than in the most post-industrial cities (hypothesis 3). The empirical validity of these two propositions will now be assessed.

As the dataset used for testing hypothesis 2 and 3 has a multi-level structure (922 respondents within 22 cities) as well, there is again need for multi-level modeling. Table 3 shows that 5 per cent – (0.051/(0.051 + 0.954)) – of the variance of *ethnocentrism* exists at city level, and, subsequently, 95 percent of its variance exists at the individual

level. Model 1 shows that, at the individual level, *education* and *income* are significantly related to *ethnocentrism*, albeit that *education* is far more strongly related to *ethnocentrism* than *income* is.[4] Both relations are negative as could be expected on the basis of the argument that ethnocentrism is rooted in economic vulnerability and the concomitant competition over scarce resources: lower-educated and poor native urbanites are more ethnocentric than higher-educated and rich native urbanites. This is hardly surprising, for this has been found time and again in studies on ethnocentrism. Note, however, that there is no significant effect of *unemployment* on *ethnocentrism*.

What is more interesting in model 1 is that there is a significant effect of *service economy* on *ethnocentrism*. The effect is significant and negative, indicating that the population in the most post-industrial cities is less ethnocentric than the population in the least post-industrial cities. Although this was expected, the crucial questions that would really enable us to tell whether ethnocentrism is rooted in economic vulnerability have yet to be answered: are economically vulnerable natives less ethnocentric in the least post-industrial cities, and is this because those cities have more job opportunities at the bottom of the labour market? We will answer these questions in three steps.

First, we need to find out whether the level of ethnocentrism among the economically vulnerable differs between cities. This proved to be the case only for the lower educated and is shown in model 2.[5] Only education, and not income and unemployment, has a significant random slope (the random slopes of the latter two are therefore not shown in the model).That the impact of education on ethnocentrism differs by city can according to the ethnic competition theory be explained by the fact that lower-educated natives in the most post-industrial cities are less ethnocentric than in the least

Table 3. Multilevel regression analysis: dependent variable is ethnocentrism of native urbanites in 22 Dutch metropolitan agglomerations (2004 / 2006) (method: maximum likelihood, entries are regression coefficients and standard errors).

	Null model		*Model 1*		*Model2*		*Model 3*		*Model 4*	
	β	*S.E.*	*β*	*S.E.*	*β*	*S.E.*	*β*	*S.E.*	*β*	*S.E.*
Individual level variables										
Constant	0.085	(0.061)	0.112**	(0.058)	0.112**	(0.058)	0.107	(0.058)	0.114*	(0.060)
Education			-0.321***	(0.032)	-0.355***	(0.045)	-0.399***	(0.049)	-0.403***	(0.051)
Income			-0.083**	(0.031)	-0.080**	(0.030)	-0.078**	(0.031)	-0.078**	(0.031)
Unemployment			-0.007	(0.030)	-0.006	(0.030)	-0.005	(0.030)	-0.006	(0.030)
City Level variables										
Service economy			-0.117*	(0.066)	-0.119*	(0.065)	-0.115*	(0.064)	-0.140*	(0.076)
Opportunity structure									0.043	(0.061)
Cross-level interactions										
Education * service economy							0.085~	(0.048)	0.102~	(0.059)
Education * opportunity structure									-0.029	(0.052)
Variance city level (N = 22)	0.051**	(0.024)	0.030*	(0.018)	0.029*	(0.017)	0.030*	(0.017)	0.029*	(0.017)
Variance individual level (N = 922)	0.954***	(0.045)	0.826***	(0.040)	0.812***	(0.039)	0.813***	(0.040)	0.813***	(0.039)
Slope education					0.020~	(0.013)	0.009	(0.011)	0.008	(0.011)
Deviance	2580.21		2458.28		2453.40		2450.56		2449.86	
DF			4		1		1		2	

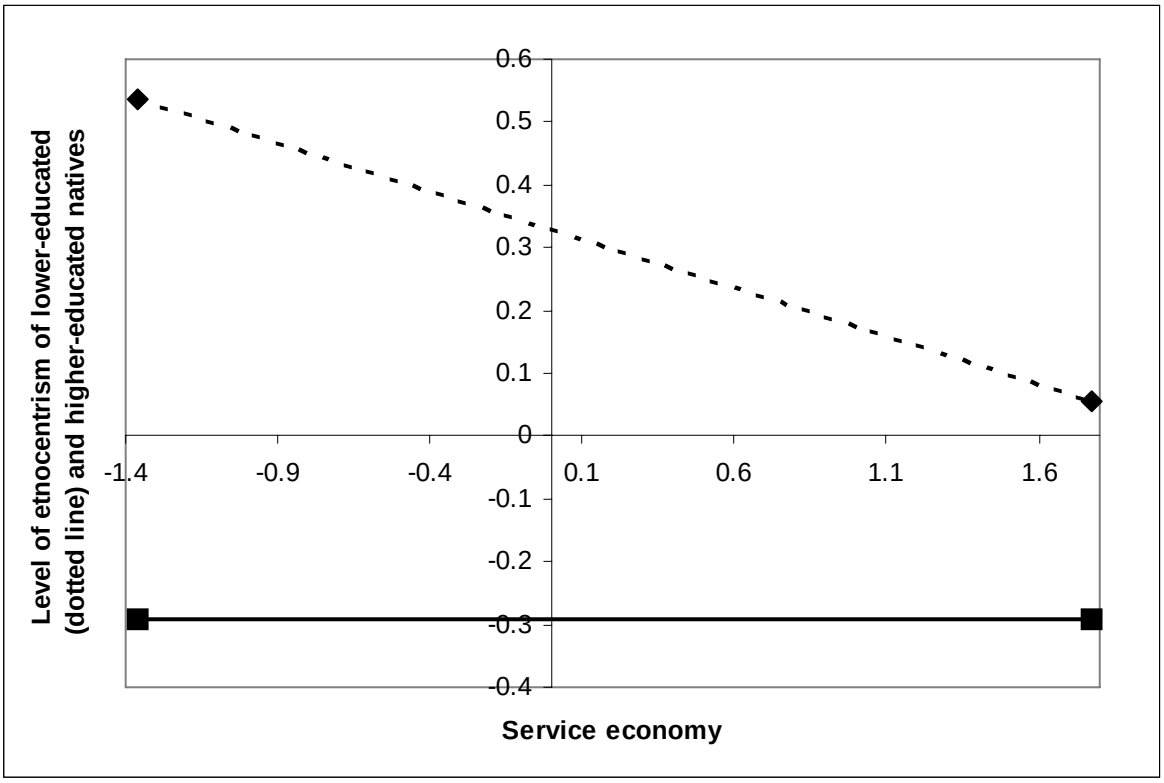
Notes: ~ p<0,1 one-sided; * $p < 0,1$; ** $p < 0.05$; *** $p < 0.01$ two-sided. Analyses of the respondents in the *Cultural Change in the Netherlands* 2004 and 2006 surveys living in the 22 Dutch metropolitan agglomerations.

post-industrial cities. Model 3 takes the second step and shows that the interaction effect of *education* with *service economy* is positive and significant.[6] This means that in the most post-industrial cities, the level of ethnocentrism of lower-educated natives more closely resembles the level of ethnocentrism of higher-educated natives than is the case in the least post-industrial cities.

To find out whether this is because lower-educated natives are less ethnocentric in the most post-industrial cities than in the least post-industrial cities, we split the data file into two halves: respondents with less than 14 years of education (lower-educated natives, N = 470 / 51%), and respondents with more than 13 years of education (higher-educated natives, N = 452 / 49%). With each dataset we reproduced the analysis in table 3 (see table A2 in the appendix) and depicted the results in figure 1. Figure 1 makes clear that, as could be expected on the basis of the ethnic competition theory, the weaker relationship between education and ethnocentrism in the most post-industrial cities is indeed caused by the lower level of ethnocentrism among lower-educated natives in those cities – confirming hypothesis 2. Yet, the litmus test for the validity of the argument that this pattern is driven by higher competition over job opportunities between lower-educated natives and immigrants in the least post-industrial cities as opposed to in the most post-industrial cities, the third step, remains and is shown in model 4 of table 3.

Model 4 enters *opportunity structure*, and the interaction effect of *opportunity structure* with *education*.[7] It shows that job opportunities are *not* responsible for the findings that the level of ethnocentrism in the most post-industrial cities is lower than in the least post-industrial cities and that the level of ethnocentrism of lower-educated natives in the former cities more closely resembles the level of higher-educated natives

Fig. 1: The impact of the extent to which a city is post-industrial on the ethnocentrism of lower-educated natives (dotted line) and higher-educated natives in 22 Dutch metropolitan agglomerations.



than in the latter cities. The coefficient of *opportunity structure* is negligible, and, more important, not significant. As a result, the coefficient of *service economy* does not decline in strength, which indicates that the economic opportunity structure is not responsible for the lower level of ethnocentrism in the most post-industrial cities. The interaction effect of *opportunity structure* with *education* is not significant as well: contrary to what can be expected on the basis of the ethnic competition theory, lower-educated natives are not more ethnocentric in cities where labour market opportunities are scarce. Consequently, the coefficient of the interaction effect of *service economy* with *education* hardly declines in strength. This means that job opportunities are not responsible for the finding that the

level of ethnocentrism of lower-educated natives is lower in the most post-industrial cities than in the least post-industrial cities – hypothesis 3 is therefore rejected.

5. Conclusions and debate

This study combined two strands of research to uncover whether urban populations in the Netherlands differ in their level of ethnocentrism, and, if so, if this is rooted in the difference in job opportunities between cities spawned by unequal post-industrial development. This combination was inspired by two sets of research findings. The first one is that both at individual and national levels, resistance towards immigrants seems to be driven by competition between economically vulnerable natives and immigrants – the so-called ethnic competition theory. In other words, attitudes towards foreigners or members of minority groups are seen as rooted in economic opportunity. The more economically vulnerable people are, so the theory predicts, the more ethnocentric they will be.

The second set of research findings stems from the debate in urban studies on the development of urban labour markets. More specifically, the debate is about whether we are witnessing a trend towards upgrading/professionalisation – a loss of jobs at the bottom of the labour market – or a trend towards polarisation – an increase of jobs at both the top and the bottom of urban labour markets. Previous research on Dutch cities suggested that the former scenario (upgrading/ professionalisation) applies to the least post-industrial cities, while the latter scenario (polarisation) applies to the most post-industrial cities. If ethnocentrism really is spurred by lack of labour-market opportunities

for economically vulnerable people, this would imply that in the least post-industrial cities economically vulnerable natives are more ethnocentric than economically vulnerable natives in the most post-industrial cities, because there are fewer job opportunities at the bottom of the labour market in the former cities than in the latter. That is why urban labour markets potentially are an important contextual variable in explaining ethnocentrism.

Our first important empirical finding is in line with the polarisation thesis: the most service-oriented urban economies create the most job opportunities at the bottom of the labour market. On the other hand and in line with the mismatch theory of upgrading labour markets, in the least service-oriented cities there are fewer job opportunities for low-skilled labour. So, polarisation theorists are right in predicting high labour demand at the bottom of the labour market because of the rise of urban service economies, but they are wrong in assuming that this is a general process manifesting itself in *all* cities. For, at least in the Netherlands, it only does so in the most service-oriented cities. Mismatch theorists are right in predicting low labour demand at the bottom of the labour market as far as the least post-industrial cities are concerned. According to the ethnic competition theory, one would therefore predict higher levels of ethnocentrism among the economically vulnerable in the least post-industrial cities as compared to the most post-industrial cities.

Our second empirical finding is that lower-educated natives in the least post-industrial cities are indeed more ethnocentric than in the most post-industrial cities. Yet, contrary to the logic of the ethnic competition theory, and contrary to arguments of a similar kind by proponents of the upgrading perspective in urban studies for that matter,

this is *not* driven by competition over scarce economic resources. The fact that there are more job opportunities at the bottom of the labour market in the most post-industrial cities than in the least post-industrial cities proved not to be responsible for the finding that in the former lower-educated natives are less ethnocentric than in the latter.

This is a remarkable finding considering the widespread idea that the ethnocentrism of lower-educated natives is rooted in their precarious economic conditions, all the more so, as this study performed a stricter test of this idea than most other studies that model national-level indicators of this competition: competition over job opportunities manifests itself at the urban level rather than at the national level. We, therefore, have to conclude that another explanation has to be found for the finding that lower-educated natives in the most service-oriented urban economies are less ethnocentric than their counterparts in the least service-oriented cities.

Two possible things come to mind in this respect. The first one can be derived from Florida's (2003) work on the creative class. Florida has argued that members of the creative class are attracted to cities with a lively cultural climate and an atmosphere of tolerance and a high degree of social heterogeneity. Florida (2005) shows that those cities have service-oriented urban economies. That could be the explanation of our finding that there is less ethnocentrism in service-oriented cities than in more traditional industrial cities. The logic explaining different levels of ethnocentrism in post-industrial cities and industrial cities would then not be the *economy* of these cities, but, rather, their *culture* in terms of a specific local cultural ethos or atmosphere. The fact that it is not the poor and unemployed, but the lower educated who differ in their level of ethnocentrism between cities also points in that direction. For, contrary to income and unemployment, education

does not only indicates one's economic position, but also one's cultural capital (Van der Waal et al., 2007), which is an important driver for cultural tolerance in general and tolerance towards ethnic minorities in particular (Houtman, 2003, Van der Waal et al., 2010).

The second explanation – which is not necessarily at odds with the first – as to why there is less ethnocentrism in service-oriented urban economies compared to industrial urban economies might be related to a higher share of members of minority groups employed in services. In that case, ethnocentrism would decrease because of the fact that members of all kind of ethnic groups work together on a daily basis. This, then, could lead to more mutual understanding, or at least familiarity and tolerance. There is a resemblance here with the contact-hypothesis (see among many others Oliver and Mendelberg, 2000; Oliver and Wong, 2003) suggesting that people of different ethnic or racial background meeting in everyday life at the neighbourhood level leads to a decrease of ethnocentrism. The same mechanism may be operational on the job. Arguably, contact on the job is much more intense than just living together in the same neighbourhood (Ellis et al., 2004). If so, working together demands more mutual accommodation than just residing in the same neighbourhood.

Notes

1 http://statline.cbs.nl/statweb/

2 www.scp.nl

3 Model 1 is a significant improvement of the null model as the deviance drops 33.68 (658.46 – 624.78) in points, which is more than the 12.02 that is needed for a significance decline at 5 percent level when using seven degrees of freedom (seven variables were entered into the model).

4 Model 1 is a significant improvement of the null model as the deviance drops 121.93 (2580.21 – 2458.28) in points, which is more than the 9.488 that is needed for a significance decline at 5 percent level when using four degrees of freedom (four variables were entered into the model).

5 Model 2 is a significant improvement of the null model as the deviance drops 4.88 (2458.28 – 2453.40) in points, which is more than the 3.841 that is needed for a significance decline at 5 percent level when using one degree of freedom.

6 Model 3 is a significant improvement of the null model as the deviance drops 2.84 (2453.40 – 2450.56) in points, which is more than the 2.706 that is needed for a significance decline at 10 percent level when using one degree of freedom.

7 Model 4 is not a significant improvement of the null model as the deviance drops 4.54 (2450.56– 2449.86) in points, which is less than the 4.605 that is needed for a significance decline at 5 percent level when using two degrees of freedom.

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Appendix

Table A1. Averages and standard deviations of *unemployment level of the lower educated* in 22 Dutch metropolitan agglomerations from 1998 through 2007.

	1998	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*
Average	4.45	3.65	3.01	2.83	3.35	4.66	5.68	5.82	5.07	4.33
Standard deviation	1.50	1.38	1.27	1.07	1.03	1.38	1.40	1.87	1.54	1.35
N	22	22	22	22	22	22	22	22	22	22

Source: own dataset computed with data retrieved from Statline service, Statistics Netherlands (CBS).

Table A2. Multilevel regression analysis: dependent variable is *ethnocentrism of lower-educated and higher-educated natives* respectively in the 22 Dutch metropolitan agglomerations (2004/2006) (method: maximum likelihood, entries are regression coefficients and standard errors).

	Lower educated				*Higher educated*			
	Null Model		*Model 1*		*Null model*		*Model 1*	
Independents	*β*	*S.E.*	*β*	*S.E.*	*β*	*S.E.*	*β*	*S.E.*
Constant	0.384***	(0.083)	0.329***	(0.078)	-0.278***	(0.050)	-0.290***	(0.047)
Service economy			-0.154*	(0.079)			-0.049	(0.048)
Variance city level (N = 22)	0.084*	(0.044)	0.056~	(0.037)	0.016~	(0.011)	0.011	(0.011)
Variance individual level	1.096***	(0.073)	1.096	(0.073)	0.582***	(0.039)	0.282***	(0.039)
Deviance	1395.91		1392.70		1046.26		1045.41	
DF			1				1	
N	470		470		452		452	

Notes: ~ p<0,1 one-sided; * $p < 0,1$; ** $p < 0.05$; *** $p < 0.01$ two-sided. Analyses of the respondents in the *Cultural Change in the Netherlands* 2004 and 2006 surveys living in the 22 Dutch metropolitan agglomerations.