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Changing social stratification in Vienna: Why are migrants declining from the middle of society?

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Abstract

The social stratification systems of major cities are transforming all around the globe. International research has been discussing this trend and focus on changing occupational classes. However, the precise effects on urban households, taking social welfare and different family arrangements into account, as well as the precise effects on people with a migration background, remain unclear. Using the example of Vienna, this article examines immigration as a key dimension for social stratification. Although household income structures in Austria have remained comparatively stable over the past two decades, the middle-income share in Vienna (as the sole metropolis in Austria) has dramatically decreased. This predominantly affects people from migrant backgrounds. Using a comprehensive dataset (two waves, $N = 16,700$ participants, including $N = 4,500$ migrants), we systematically examine the role of (a) migration-specific and (b) education- and employment-related factors to explain the decline of middle-income migrants. The results of multinomial logistic regression and decomposition analyses suggest that transformations in the labour market is the main driving force. Changing migrant characteristics have counteracted this process. If today's migrants displayed similar showed characteristics (e.g., origin and educational levels) to those prevalent in the past decade, the ethnic stratification disparities would have been even stronger.

KEYWORDS

migration, shrinking middle class, social inequality, social stratification, Vienna

1 | INTRODUCTION

One of the most debated issues in urban research is the continuing social stratification transformation of cities due to the forces of tertiarisation, globalisation, and demographic change (Burgers & Musterd, 2002; Butler, 2003; Savage et al., 2013). The debate is centred around a number of key theses. First, there is the polarisation thesis of Friedmann (1986) and Sassen (1991). In Sassen's (2016) view, cities as sites of production are increasingly exposed to new challenges, including "a sharp rise in the demand for both high-level talent and masses of low-wage workers. What it needs least are the traditional modest

middle classes so central to the era when mass consumption was the dominant logic." This increase in employees among the top and bottom occupational groups, along with a shrinking of occupational groups in the middle, Sassen would argue, leads to a polarisation of social stratification and a growing income gap between households. Second, authors such as Butler, Hamnett, and Ramsden (2008), Tai (2006), or Hamnett (2015) suggest that different cities present different scenarios in the transformation of their social structures. "The argument in the London context is that middle-class growth or professionalization has been the dominant process which has been linked with a decline in the size of the traditional working class since the early 1960s. This argument

has received empirical support in a number of other cities such as The Randstad, New York, Paris, [Hong Kong], Singapore and Cape Town." (Hamnett, 2015: 240). In the context of this middle-class expansion thesis, the changing social stratification of major cities can be described as an "ongoing trend towards social upgrading ..., a process in turn partly fueled by an expansion of the middle classes within the city to incorporate greater numbers from lower professional and intermediate non-manual groups" (Cunningham & Savage, 2017: 26). A third thesis takes the role of the state and the capacity of cities to govern economic and social structural transformations into account. It stresses the continued significance of welfare and redistributive policies, and labour market and educational programmes, at the local and regional levels. European cities have retained distinctive governance features and relatively low levels of social and spatial inequalities (Le Galès, 2002; Musterd & Ostendorf, 2013).

The present paper is intended to contribute to this debate by focusing on migrant middle classes and exploring *why* middle-class *migrants* have *declined*. This issue has not been addressed in the international literature using a systematic empirical analysis of large scale datasets. Several studies highlight the need for further research into the relationship between increasing immigration and ongoing changes in urban social stratification (e.g., Bailey, van Gent, & Musterd, 2017; Hamnett, 2015; May et al., 2007; Sassen, 1991; Watt, 2008).[1] To this end, we make exemplary use of a dataset on the living conditions of the Viennese population in 2003 and 2013.[2] This dataset is representative of the city's population. It includes a large sample of people from migrant backgrounds (N = 4,500) displaying multiple characteristics (e.g., nationality and language skills). Regression and decomposition analyses are applied to examine the dataset. The focus is, first, on the significance of migration-specific characteristics for stratification (e.g., national origin) and on whether the decline of middle class migrants may be explained by changing migration flows and a resulting variation in the composition of the migrant population. Second, we examine changing education- and employment-related factors in order to capture their impact on the transformation of social stratification.

Vienna, as an important European metropolis, provides a rewarding case study. First, a structural change from the industrial to the service-based society has become particularly visible in this city. Currently, 7% of gainfully employed persons are in the industrial sector and income differences are increasingly marked (Görgl, Helbich, Matznetter, & Fassmann, 2011). Second, Vienna has experienced strong population growth over the past two decades due to new forms of immigration. As of January 1, 2017, almost half of the city's

population has migrant backgrounds (Manolakos, Luger, & Boztepe, 2017).[3] Thirdly, the relatively stable stratification structure on the national level in Austria is not mirrored in Vienna (Hatz, Kohlbacher, & Reeger, 2016). Although internationally, Austria is virtually considered a "stronghold of stability"; the middle class share in Vienna has shrunk. These developments hint towards "subsurface" dynamics that have been given little attention in the international research to date.

2 | THE TRANSFORMATION OF URBAN SOCIAL STRATIFICATION: KEY ARGUMENTS AND SOCIOSPATIAL CONTEXT FOR THE CITY OF VIENNA

In urban research, most studies that address questions of the transformation of social structures in cities apply data and analytical concepts which focus on the changing occupational structure in a neo-Weberian sense (e.g., Boterman, Manting, & Musterd, 2018; Butler et al., 2008; Cunningham & Savage, 2017; Hamnett, 2015; Sassen, 1991; Savage et al., 2013).[4] Most adopt the "Constant Flux" concept (Erikson & Goldthorpe, 1992) and omit those not employed (e.g., retirees, nonemployed mothers and fathers, and unemployed persons). Depending on regions/countries, this may omit 30% to 35% of the adult population. Moreover, such a conceptualisation of social stratification obscures the structure of inequality at the household level. This is typically shaped not only by one or two earners' incomes but also by welfare state interventions, private transfers between households, and the numbers of persons living in households (Atkinson & Brandolini, 2011; Western, Bloome, & Percheski, 2008). The opportunities for an individual to access all income resources of the household are crucial for that individual's position in a given society (Mau & Verwiebe, 2010: 196). Investigations of the transformation of urban social stratification at the level of household income may then consider that household homogeneity is increasingly due to women's rising employment rates and educational aspirations (Breen, Luijkx, Müller, & Pollak, 2009; Kenworthy & Pontusson, 2005).

With a view on Vienna, the following sections present various operationalisations of urban social stratification.

Table 1 on the shifts in occupational classes within the past 20 years not only confirms the findings of other studies but also shows that social stratification has its own dynamics in Vienna. As in many major cities, the class of professionals and managers has expanded substantially over the past two decades.[5] This is similar to the trends reported

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[1]Tai (2006: 1753) argues, for example, that "social polarisation in Singapore, Hong Kong and Taipei occurs primarily in the external migrant labour market rather than in the internal social structure [of the native population]." Similarly, Watt (2008: 209) argues with regard to the lower social classes of London that these "fractions include a new migrant 'reserve army of labour' doing many of the city's socially invisible, often 'dirty jobs' (cleaning, caring, etc.); alongside white and established Black and Asian groups who intermit over time between routine employment (manual and non-manual) and various forms of non-employment."

[2]In a contextualising approach, we also applied EU-SILC and Austrian Microcensus data for the period of the last two decades.

[3]The figures on the sectoral mix and immigration are based on the Austrian Microcensus (authors' calculations).

[4]A well-integrated middle class is seen as a substantial feature of European societies (Mau & Verwiebe, 2010: 39). The middle class stands for steadily earned incomes, civic involvement, sound family relationships, and social participation. The expansion of this societal segment was inextricably linked to the economic upturn after World War II, with the development of the welfare state and educational system, a process of democratisation, and the establishment of civil society in Europe. However, social stratification research repeatedly shows that in many countries, the middle class has come under increasing pressure over the past years (Foster & Wolfson, 2010; Massari, Pittau, & Zelli, 2009; Whelan, Russell, & Maître, 2016) that corresponds with substantial changes of the stratification system and increasing social inequality (Alderson, Beckfield, & Nielsen, 2005; Atkinson & Brandolini, 2011).

[5]Average gross monthly wages in that class have increased as well (from € 3,500 in 2004 to € 4,600 in 2016; EU-SILC, own calculations).

TABLE 1 Social stratification in Vienna based on occupational classes (1996–2017)

Higher class		1996	2003	2007	2010	2013	2017
Managers and professionals	Austrian natives	25.7	26.5	24.9	25.4	34.5	36.7
	Migrants	12.2	14.0	14.6	21.7	21.8	24.0
	Total	23.4	24.0	22.9	24.6	31.5	33.0
Middle class		53.1	48.5	50.8	49.1	41.5	39.5
Technicians and associate professionals	Austrian natives	17.7	19.9	24.1	24.6	21.4	21.8
	Migrants	6.4	6.4	13.2	11.6	9.1	11.6
	Total	15.8	17.3	22.0	21.8	18.5	18.8
Qualified white-collar workers	Austrian natives	20.5	17.4	15.9	15.7	12.1	10.5
	Migrants	3.7	6.2	6.0	6.6	5.2	5.7
	Total	17.6	15.2	14.0	13.8	10.4	9.1
Qualified manual workers	Austrian natives	16.5	13.4	12.8	12.0	10.4	9.0
	Migrants	35.0	26.8	23.0	18.8	19.9	17.6
	Total	19.7	16.0	14.8	13.5	12.6	11.6
Lower classes		23.5	27.3	26.2	26.2	26.7	27.5
Routine service and sales workers	Austrian natives	12.0	14.0	14.2	14.1	17.1	18.2
	Migrants	12.2	15.4	17.9	18.2	24.4	22.6
	Total	12.1	14.3	14.9	15.0	18.8	19.5
Unqualified manual workers	Austrian natives	7.4	8.5	7.8	8.0	4.4	3.6
	Migrants	30.6	31.2	25.3	23.1	19.4	18.5
	Total	11.4	13.0	11.3	11.2	7.9	8.0

Note. Source: Austrian Microcensus; weighted analysis, own calculation; N = 25,325 (1996), N = 23,806 (2003), N = 23,278 (2007), N = 21,386 (2010), N = 22,016 (2013), N = 22,611 (2017); migration status based on citizenship, class based on ISCO classification (first digits, collapsed).

by Butler et al. (2008) and Hamnett (2015) for London. However, the share of jobs in middle-class positions has decreased over time from 53.1% to 39.5%. This is especially due to a substantial decline in qualified white-collar workers (1996: 17.6%; 2017: 9.1%) and manual workers[6] (1996: 19.7%; 2017: 11.6%) in the Viennese labour market. Correspondingly, employment in lower-class jobs grew from 23.5% in 1996 to 27.5% in 2017, mainly due to a massive increase in routine service and sales jobs. Unqualified manual jobs declined as de-industrialisation continued.[7] It is important to note that the dynamics of social stratification vary substantially between natives and migrants (Tai, 2006; Watt, 2008): The share of migrants in upper-class and higher middle-class jobs is much lower than that of native Austrians. Instead, migrants are overrepresented in qualified manual jobs (2017: 17.6%), as well as in routine service/sales jobs (2017: 22.6%) and unqualified manual work (2017: 18.5%). Thus, the migrant middle classes account for only 35% of the jobs migrants hold in Vienna.

Table 2 illustrates the changing social stratification in Vienna using equivalised household incomes that consider welfare transfers and household size. These figures confirm that the dynamics of stratification vary substantially between migrants and natives. The group of migrants holding middle-class positions in the income distribution in Vienna shrunk considerably between 2004 and 2016, whereas the share of middle-class Austrian natives declined in a quite modest way. This corresponds with a sharp rise in poverty among migrants (2016: 40.5%), diminishing poverty among Austrian natives (2016: 10.9%), a rise of Austrian natives in the top income group (2016: 11.6%), and an increase in individuals deriving an income between

60% and 80% of the national median income for both migrants (2016: 25.0%) and Austrian natives (2016: 16.3%).

The spatial dynamics of changing social stratification (Boterman et al., 2018; Davidson & Wyly, 2012) in Vienna corresponds with the trends described above. Figure 1 displays the development of the middle income class between 2003 and 2013 for four selected housing types, characteristically located in different parts of the city: (a) The historical centre of Vienna is characterised by high housing density and many large, well equipped flats, often dating back to the early 20th century. Regarding the income structure, the Austrian middle class (dark bar chart) was stable and slightly growing (2003: 41%, 2013: 43%), whereas the migrant middle class declined from 39% to 36% over this period. (b) The second housing type is large-scale social housing built after 1960 in the South and Northeast of the city, mostly constructed by the municipality.[8] This part of Vienna shows stability in the share of Austrian middle class residents (2003: 48%, 2013: 47%) and a decline for the migrant middle class from 39% in 2003 to 35% in 2013. (c) Housing areas constructed between 1918 and 1960 typically have a lower housing density, as well as smaller flats. Figure 1 shows a decline of the middle class for both Austrian natives and migrants: in 2013 less than 30% of migrants were middle class in this housing sector (going hand in hand with a strong increase in poverty among migrants in this area). (d) In the well-equipped single-family houses located in the Eastern outskirts of Vienna, the share of Austrian natives belonging to the middle class category rose substantially between 2003 and 2013. This is evidence of a suburbanisation process involving middle-class individuals within the city. By contrast, the share of middle-class migrants in this part of the city declined considerably. Overall, these trends confirm the spatial dynamics of changing stratification in Vienna. Middle income migrants are declining

[6]It is justified to classify qualified manual workers belonging to the middle class in Austria: 95% of those workers are paid based on collective bargaining agreements; thus, their average monthly salary (2016: € 2,200) mirrors the national median salary (2016: € 2,250; EU-SILC, own calculations).

[7]Workers in both classes have average monthly salaries (€ 1,500) clearly below the national median monthly salary (EU-SILC 2016, own calculations).

[8]Vienna is considered unique in its social housing policies: 40% of the population live in publicly owned buildings (Austrian Microcensus, own calculations).

TABLE 2 Social stratification in Vienna and Austria based on equivalised household incomes, 2004 to 2016 (in %)

Stratification: in percent of national median income	Vienna	2004	2016
Greater than 200% (wealth)	Austrian natives	9.7	11.6
	Migrants	2.7	2.3
	Total	8.6	9.2
140–200%	Austrian natives	17.3	16.6
	Migrants	3.7	5.6
	Total	15.2	13.7
80–140% (middle class)	Austrian natives	46.1	44.5
	Migrants	43.0	26.6
	Total	45.6	39.9
60–80%	Austrian natives	14.8	16.3
	Migrants	20.0	25.0
	Total	15.6	18.6
below 60% (at risk of poverty)	Austrian natives	12.2	10.9
	Migrants	30.6	40.5
	Total	14.9	18.6

Note. Source: EU-SILC, own calculations (weighted data); *N* = 13,049 (2016), *N* = 11,550 (2004); stratification calculated on basis of national median incomes (equivalised household incomes). For instance, respondents belong to the middle class if they earn 80% to 140% of the national median income.

throughout the city, irrespective of housing types. By contrast, there seems to be spatial mobility among middle class Austrians: moving from smaller apartments, constructed after World War I and II, to single-family housing at the Western periphery of the city.

Against this background, we want to analyse why middle migrants have declined in Vienna. For the empirical analysis we include *all* individuals (including those not integrated in the labour market) and welfare transfers and household composition data. We also use income distribution data based on equivalised household incomes (Atkinson & Brandolini, 2011) and include results from an analysis of changes in the Viennese occupational structure in order to substantiate our findings.

3 | CHANGING SOCIAL STRATIFICATION IN VIENNA: POTENTIAL CAUSES OF DECLINE FOR THE MIGRANT MIDDLE CLASS

The share of the middle class in Vienna has substantially shrunk over the last two decades (regardless of the operationalisation of class affiliation). Theoretical considerations to explain this decline typically refer to migration-specific, education- and employment-related factors
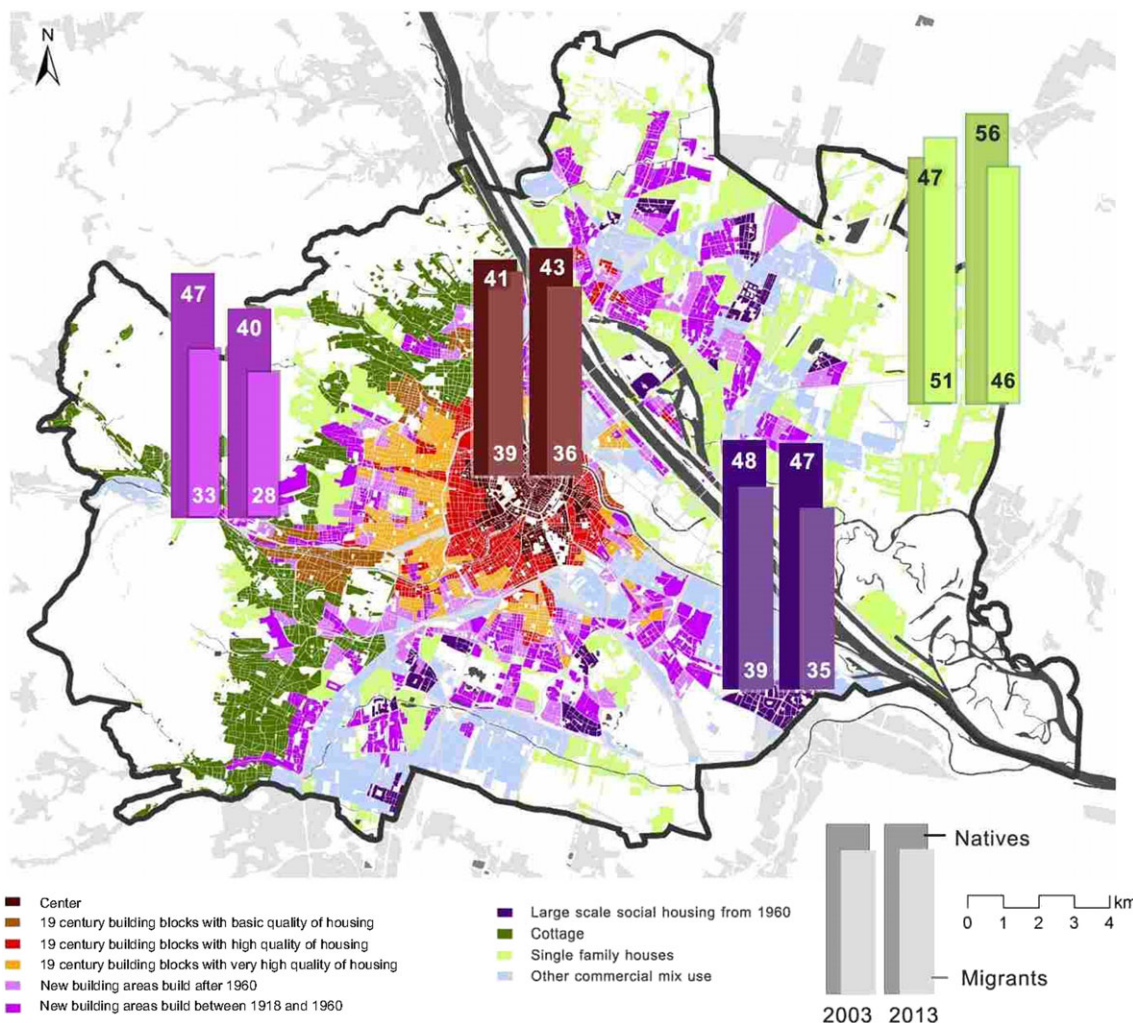

FIGURE 1 Shrinking of migrant middle class in urban areas

(Barone & van de Werfhorst, 2011; Boterman et al., 2018; Hamnett, 2015; Zimmermann, 2005).[9] For example, *migration-specific factors* can include durations of stay and legal status (citizenship). Research has argued that integration-promoting factors have a positive impact on one's position in the stratification system. Increasing lengths of stay go hand in hand with improved acculturation and social-network integration (Watt, 2008; Zimmermann, 2005). Likewise, the discontinuation of legal obstacles, such as by acquiring citizenship, is considered to facilitate participation in the labour market (Kogan, 2003) and to ensure full access to welfare benefits (Lohmann, 2009). For these reasons, the second generation—migrants' children raised in Vienna—is expected to be less frequently affected by social decline: an assumption which we will test empirically. Second generation migrants generally hold Austrian educational qualifications that provide favourable labour market positioning due to close connections between the training/educational systems and the labour market.

The migrants' countries of origin are equally relevant. The city's population has grown since the 1990s due to increasing immigration. Initially, such growth was driven by migrants from ex-Yugoslavia and Turkey (MA 23, 2017). However, with Austria's accession to the European Union in 1995 and the EU eastward expansion in 2004/2007 people from Germany, Poland, and Romania have constituted the largest groups of migrants to come to Vienna (MA 23, 2017). These migrants are better educated than both the "classic" labour migrants of the 1960s and 1970s and the average native Viennese population. The "classic" labour migrants, for example, Turkish and ex-Yugoslav groups, face risks of downward mobility in Vienna: their incomes are approximately one third lower than the average as they experience educational disadvantage and severe discrimination (Sievers, Atac, & Schnell, 2014; Verwiebe, Seewann, Wolf, & Hacioglu, 2016). On account of EU legislation, in turn, EU citizens enjoy better access to the Austrian labour market and generate higher average incomes than other migrants (Statistics Austria, 2015).Human capital, as acquired by *education and training*, is paramount. Advanced levels of education are associated with higher salaries and wages, lower risks of temporary employment or unemployment, and reduced poverty risks (Barone & van de Werfhorst, 2011). As social positions are often "inherited" in Austria, education may offer migrants' children the only opportunity to enter a higher social class than their parents (Chiswick & DebBurman, 2004).[10] International research has also shown that it is essential for migrants to acquire the language of their destination country. Communicative deficiencies impede the application of otherwise available human capital (Esser, 2004; Guo, 2013; Ours & Veenman, 2003).

In addition, the arrival of well trained new (EU) migrants has resulted in a crowding out effect on earlier generations of less qualified immigrant workers (Manolakos et al., 2017). Similarly, the social and economic situation of migrants from the guest–worker generation has deteriorated. This leads us to another key assumption. The decline of middle class migrants has also been impacted upon by *employment-related factors* (McKernan & Ratcliffe, 2005).

Employment intensity (the extent of gainful employment), occupational positioning, and industry affiliation play important roles. The guest workers of the 1960s and 1970s, as well as lowly skilled first generation migrants in more recent years, are no longer employed in comparably well paid industrial jobs in Vienna (Manolakos et al., 2017). They more frequently find themselves in simple, poorly paid services or in sectors marked by stagnating real wages (e.g., in the hotel and restaurant industry; see also Table 1 in Section 2).[11] Yet the more recent and better qualified groups of migrants from the EU-15 are less affected: many of them are employed in well paying, industry-related service enterprises, international headquarters, or in the Viennese banking sector. In addition, migrants are especially affected in times of economic downturn (Lohmann, 2009) experiencing an increase in unemployment throughout Europe over the most recent economic crisis period (European Commission, 2016). This is a development that has also been identified in Vienna. 40% of the unemployed population in this city are foreign citizens (AMS, 2016).

Taken together, these developments support two main scenarios. On one hand, the social decline of guest workers and other long-term migrants. On the other hand, the improved education levels and income positions among more recent migrants, as well as the improved education of second generation migrants trained in Austria. The latter could have a positive and stabilising effect. The following empirical analyses explore both scenarios.

4 | DATABASE

4.1 | Data and variables

The data for our analyses were collected from May to October 2003 (*N* = 8,300) and from October 2012 to July 2013 (N = 8,400).[12] These are representative of the Viennese population aged 15 and above, and include 2,081 migrants in 2003 and 2,490 in 2013. The estimates of income class affiliation among foreign-born individuals are only slightly different from the results obtained with EU-SILC data.[13] In contrast to EU-SILC, the applied data on Vienna includes such characteristics as national origin, citizenship, naturalisation, and language skills (for a sample description, see S1, Table A.1).

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[9]Other key dimensions are controlled for in the empirical analyses as well (Section 5).

[10]Furthermore, lacking recognition to be granted with regard to educational levels achieved in their countries of origin makes it difficult for the first generation to utilise their own human capital. Yet even though migrants with higher levels of education still face lower risks of poverty and social decline than migrants with lower levels of education, education protects migrants less effectively from poverty than people without migrant backgrounds (Goebel, Grabka, & Schröder, 2015; Guo, 2013).

[11]Differences are pronounced between occupational groups and lines of business in Austria. In particular, services in restaurants and hotels as well as in trade are characterised by low-wage employment. For instance, average gross hourly wages amount to almost € 20 in manufacturing but less than € 12 in hospitality or trade (EU-SILC 2016, authors' calculations).

[12]Life and Quality of Life in Vienna (LLQW 2003) and Basic Social Science Research for Vienna (SOWI 2013).

[13]For example, in 2013, the middle class comprised 32% (EU-SILC: 30%), and the lower middle and lower classes comprised 21% and 38%, respectively (EU-SILC: 21% and 36%, respectively).

We applied a well-established concept to measure *class affiliation* within the income distribution (Atkinson & Brandolini, 2011). Annually available net household income, weighted according to the number of adults and children in the respondent households, served as a starting point. The Austria-wide median was calculated on the basis of this equivalised household income. The *middle class* was defined for incomes between 80% and 140% of the median income. The upper middle class (140% to 200%) and upper class (more than 200%) are both above the median income; the lower middle class (60 to 80%) and the lower class (less than 60%) are both below the median income. A variety of characteristics were drawn upon to scrutinise the respondents' *migrant backgrounds*: The *first generation* included foreign-born migrants, and the *second generation* included immigrants' children born in Austria (with at least one parent born abroad). *National origin* was based on the respondents' own countries of birth (in the first generation) or those of their parents (in the second generation) and comprised five categories: (a) Turkey, (b) Ex-Yugoslavia, (c) EU-15 states, (d) other EU countries, and (e) third countries. Citizenship was an additional differentiating factor (Austrian by birth, by naturalisation, or other nationality).

Secondary school qualifications, language skills, income intensity, occupational status, and industry affiliation were drawn upon to ascertain education- and employment-related factors. The highest levels of completed *education* comprised four categories: (a) compulsory schooling, (b) vocational training, (c) general or vocational high school, and (d) university degrees. The *language skills* of migrants were established with two questions: (a) Is your spoken German very good, good, fair or poor, or don't you speak German? (b) Is your written German very good, good, fair or poor, or don't you write in German? (1 = *very good*, to 5 = *don't speak/write German*). The answers were combined to categorise language skills as (a) very good in writing and orally, (b) good in writing and orally (average 1.5 to 2.5), and (c) fair to poor (average above 2.5). *Employment intensity* was captured as either full-time or part-time (more/less than 36 hours a week). Non-employed respondents included unemployed individuals, retirees, recipients of education (trainees, pupils, students), and others (those on leave, househusbands/−wives, etc.). *Occupational status* categorised freelancers, self-employed individuals, low-rank and middle-rank employees, highly qualified employees, and skilled and unskilled manual workers. *Industry affiliation* included (a) fishing, agriculture, and forestry, (b) trade (reference category), (c) hospitality industry, (d) financial and economically oriented services, (e) public administration, education, social services, (f) other service activities, (g) manufacturing, (h) information and communication, and (i) electricity, water supply, and construction.

4.2 | Analytical strategy and methods

Various logistic and multinomial regression models were estimated to explain affiliation with the middle class as well as lower and upper classes. The tables in Section 5 present average marginal effects resulting from these models, as these are most likely to be comparable across different models (Best & Wolf, 2012).

The difference between migrants' class affiliations in 2003 and 2013 was initially examined using a pooled sample of both datasets. This model first included a binary variable to capture the difference

between 2003 and 2013 (Model A1). Migration-specific and other characteristics were then included in the Models A2 to A4. The KHB method proposed by Karlson, Holm, and Breen (2012) was used to test whether the established difference changed across the models. Furthermore, decomposition analyses were applied to examine the impact of changes in the migrant composition on the development of Viennese social stratification. Employing the methods of Fairlie (2006), Jann (2006), and of Sinning, Hahn, and Bauer (2008), results for divergent variants and specifications were obtained (see S1, Table A.3). Binomial models were primarily employed to differentiate between affiliation with lower (below the middle class) and other income classes (middle and higher classes). Separate models for 2003 and 2013 were calculated, and the method proposed by Allison (1999) and Hoetker (2007) applied to test whether the coefficients differed between the separately estimated models.[14]

Finally, one's position within the stratification system was with the overall sample of 2013 in order to analyse differences between natives and migrants while using further independent variables (language skills, industry affiliation) exclusively retrieved in 2013. Here, as well, binomial models were drawn upon.[15] In a first step, differences between natives and first- and second-generation migrants were investigated (Model B1). Then, the KHB method was employed to investigate whether the established differences would lessen once other migration-specific and other characteristics were included in Models B2-B4 (including gender, age, and family status).

5 | RESULTS: EXPLAINING THE SHRINKING OF THE MIGRANT MIDDLE CLASS IN VIENNA

Table 3 presents the results of the multinomial logistic regression models as based on the pooled sample of people with migrant backgrounds from 2003 to 2013. Model A1 confirmed the greater likelihood of migrants' affiliation with a lower class in 2013 and their lower likelihood of affiliation with middle or upper classes in 2003. This difference was shown to be even larger in Models A2 to A4, when further variables were included, than in Model A1[16]: Accordingly, if the migrant population had shown the same characteristics in 2013 (e.g., origin, education, and gainful employment) as in 2003, even more individuals would have been affiliated with the lower classes.

A set of other relevant findings were also evident: The likelihood of being affiliated with lower income groups was lower among second-

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[14]In order to avoid difficulties due to unobserved variation, we followed the recommendation of Hoetker (2007) and tested the relationships between two coefficients rather than single coefficients.

[15]This aggregation was considered to be sensible in view of the size of the sample, especially in an effort to avoid estimation problems with regard to affiliation with upper classes. For example, the sample contains no unemployed migrants affiliated with the two upper classes compared.

[16]Applying the KHB method, a test showed that the corresponding coefficients (2003/2013) in Models A1 and A2 were significantly different both in terms of affiliation with lower classes ($b = -0.09$; $z = -2.99$; $p < 0.01$) and with upper classes ($b = 0.07$; $z = 2.87$; $p < 0.01$) as compared with the middle class, respectively. No such statistically significant differences were identified between Model A2 and Models A3 or A4.

TABLE 3 Differences in class affiliation among Viennese with migrant backgrounds

Affiliation with ...	Model A1 AME	Model A2 AME	Model A3 AME	Model A4 AME
... lower classes				
2013 compared with 2003	0.06****	0.08****	0.12****	0.11****
Second generation, compared with first generation	−0.12****	0.00	−0.01	−0.01
National origin: compared with Turkey				
successor states of Yugoslavia	--	−0.25****	−0.20****	−0.18****
EU member states of 1995	--	−0.45****	−0.29****	−0.24****
other EU countries	--	−0.38****	−0.26****	−0.21****
third countries	--	−0.28****	−0.18****	−0.16****
Citizenship: compared with non-Austrian				
Austrian by naturalisation	--	−0.04*	−0.02	−0.03
Austrian by birth	--	−0.09***	−0.06*	−0.06*
... middle class				
2013 compared with 2003	−0.03*	−0.04***	−0.07****	−0.06****
Second generation, compared with first generation	0.09****	0.01	0.01	0.00
National origin: compared with Turkey				
successor states of Yugoslavia	--	0.20****	0.15****	0.14****
EU member states of 1995	--	0.29****	0.19****	0.17****
other EU countries	--	0.27****	0.18****	0.15****
third countries	--	0.18****	0.13****	0.11****
Citizenship: compared with non-Austrian				
Austrian by naturalisation	--	0.02	0.00	0.00
Austrian by birth	--	0.07**	0.03	0.04
... upper classes				
2013 compared with 2003	−0.03*	−0.04****	−0.05****	−0.05****
Second generation, compared with first generation	0.03*	−0.01	0.00	0.00
National origin: compared with Turkey				
successor states of Yugoslavia	--	0.05****	0.05***	0.04**
EU member states of 1995	--	0.16****	0.10****	0.08****
other EU countries	--	0.12****	0.08****	0.06****
third countries	--	0.10****	0.06***	0.05**
Citizenship: compared with non-Austrian				
Austrian by naturalisation	--	0.01	0.02*	0.02
Austrian by birth	--	0.02	0.02	0.02
Controls:				
education, employment intensity, occupational status		--	incl.	incl.
family status, gender, age	--	--	--	incl.
Constant	incl.	incl.	incl.	incl.
Adj Count R^2	3	9	20	25

Note. Source: LLQW 2003, SOWI 2013 (own calculations); N = 3,557. AME: average marginal effect.

*p < 0.10; **p < 0.05; ***p < 0.01; ****p < 0.001.

generation migrants, especially natural-born citizens, thus corroborating our initial assumptions and the findings from other studies (Crul, Schneider, & Lelie, 2012; Kristen & Granato, 2007). Country of origin was a crucial factor in determining class and no difference was observed between the first and the second generation (cf. Model A1 and A2).[17] Those from a Turkish migrant background were often allocated to the

lower classes, whereas those from the EU-15 were most likely to be affiliated with the upper classes (Verwiebe & Eder, 2006). Almost half of the disadvantage experienced by Turkish immigrants (compared with EU-15/10 migrants) can be explained by the EU migrants' better education and labour market position (compare Models A3 and A4 with Model A2 in Table 3). For example, 25% of the EU-10 and 35% of EU-15 migrants had a university degree in 2013, compared with 9% of the Turkish group in which compulsory education still dominates (45% of Turks). Although the effects of national origin lessened when including education and other characteristics in the models (Models A3 and

[17]A test based on the KBH method showed that the corresponding coefficient (first/second generation) in Models A1 and A2 differed significantly, at least in terms of affiliation with the lower classes (b = 0.50; z = −4.83; p < 0.001).

TABLE 4 Affiliation with lower classes among Viennese with migrant backgrounds

Affiliation with a lower class (below the middle class)	2003 AME	2013 AME	Decomposition 2003-2013
Second generation, compared with first generation	−0.04	0.01	.005
National origin: compared with Turkey			
successor states of Yugoslavia	−0.25****	−0.10**	0.019****
EU member states of 1995	−0.35****	−0.19****(b)	−0.030****
other EU countries	−0.29****	−0.17****(b)	−0.021****
third countries	−0.22****	−0.10**	0.007****
Citizenship: compared with non-Austrian			
Austrian by naturalisation	−0.03	−0.02	0.002
Austrian by birth	−0.02	−0.09**(a)	−0.011**
Education: compared with compulsory schooling			
apprenticeship, secondary school	−0.09***	−0.03(a)	0.005**
high school	−0.09***	−0.09**	−0.006***
academic degree	−0.17****	−0.18****	−0.019***
Employment intensity: compared with employed, full-time			
self-employed, full-time	0.00	−0.04	0.000
employed, part-time	0.12***	0.16****	0.010****
self-employed, part-time	0.21**	0.08	0.002***
unemployed	0.29****	0.44****(a)	−0.006****
retiree	0.06*	0.08***	0.007****
trainee, pupil, student	0.02	0.27****	−0.002*
other (e.g., on leave)	0.24****	0.27****	−0.006****
Occupational status, compared with low- and middle-rank employee			
Freelancer	0.01	0.02	0.000
self-employed	0.00	0.03	0.000
highly qualified employee	−0.14****	−0.13****	−0.010****
skilled manual worker	0.11***	0.06	−0.001**
unskilled manual worker	0.20****	0.27****	−0.018****
other (including unknown)	0.14**	0.00	−0.001
Adj Count R^2	41	36	
N	1,644	1,913	

Note. The binary logistic model shown here reflects multinomial Model A3 (see Table 3). The first two columns show average marginal effects (AMEs) for respondents with migrant backgrounds for 2003 and 2013, respectively. An overall test for differences between years indicates that the two presented models differ from each other (LR χ^2 = 32.53*). The right column gives results of a decomposition analysis. It was conducted employing the method described by Fairlie (2006) and Jann (2006). The model obtained with the pooled sample was used as base model. In addition, the order of variables was randomised. Ratio tests indicating differences between coefficients in 2003 and 2013: (a)$p < 0.01$; (b)$p < 0.001$. AME: average marginal effect. Source: LLQW 2003, SOWI 2013 (own calculations); N = 3,557.

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$; ****$p < 0.001$.

A4), differences continued to persist.[18] This is a clear indication that migration background per se is a key explanation for the dynamics of social stratification in Vienna.[19]

Table 4 applies Model A3, including both migration-specific and education- and employment-related factors, to further examine the social stratification change among migrants. The table presents the results of two separate regression models for 2003 and 2013. Another

column summarises the results of a decomposition analysis. These analyses focused on the issue of affiliation with classes below the middle of the income distribution.

Table 4 confirms the significance of national origin, with slightly decreasing differences between the reference group of Turkish migrants and all other groups. Natural-born citizens with migrant backgrounds were less frequently affiliated with the lower income groups in 2013 than had been the case in 2003 (see Herzog-Punzenberger, 2017, 235). Likewise, education- and employment-specific factors proved relevant for the change in stratification among people from migrant backgrounds in Vienna. Compared with 2003, for example, intermediate qualifications were associated with lower classes in 2013. Higher educational levels continued to have a positive influence on class affiliation. Our analyses also confirmed that employment intensity is a substantial factor for stratification dynamics, and has gained in importance over

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[18]As to affiliation with the lower and upper classes, tests (KHB method) yielded several significant differences between the coefficients in Models A2 and A3 and Models A2 and A4.

[19]Following Atkinson and Brandolini (2011), and in order to substantiate our findings, we calculated a number of sensitivity analyses using various other definitions of the middle class in the income distribution. The results confirm our major findings discussed in Table 3.

TABLE 5 Class affiliation in Vienna 2013 (people with and without migrant backgrounds)

Affiliation with a lower class (below the middle class) Sample	Model B1 AME total	B2 AME total	B3 AME migrants
Migrant background: none	ref.	ref.	
First generation	0.21****	.12****	ref.
Second generation	.11****	.07****	.02
Language skills: mother tongue is German	--	--	ref.
very good in writing and orally	--	--	.10**
good in writing and orally	--	--	.13***
fair to poor	--	--	.19****
unknown	--	--	.06**
Industry affiliation (selection): Trade	--	ref.	ref.
hospitality industry	--	.09*	.10
fishing, agriculture and forestry	--	.15*	.10
financial and economically oriented services	--	−.14****	−.16**
other service activities	--	.04	.06
Controls:			
citizenship	--	--	incl.
education, employment intensity, occupational status	--	incl.	incl.
family status, gender, age	--	incl.	incl.
Adj. R^2	4	28	43
N	6,523	6,523	1,861

Note. All models additionally include a constant term. Models B2 and B3 also control for affiliation with a number of other industries (see text). AME: average marginal effect. Source: SOWI 2013 (own calculations).

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$; ****$p < 0.001$.

time. Unlike full-time employees, the risks of lower income affiliation by unemployed individuals and trainees had increased by 2013. Finally, the findings regarding the relevance of occupational status for affiliation in the stratification system corroborated our initially formulated theoretical considerations. Unskilled workers from migrant backgrounds ran a particularly high risk, which increased over time, of lower class affiliation (Beyer, 2017).

Now, how relevant is the change in migrant composition in Vienna to the transformation of its social stratification system? The findings of our decomposition analyses, estimating a counterfactual ("what if") distribution of the income distribution and presented in the right column of Table 4, can be drawn upon to address this issue. We refer to advantageous or disadvantageous composition effects.[20]

Presenting selected and substantial findings, Table 4 (third column) shows that the rise in the share of EU-15 migrants and those

from other EU countries has had an inequality-reducing effect. Their inflow to Vienna has subdued the increase in the lower income groups and thus the associated shrinking of the migrant middle class. The strong increase in the second generation of the migrant population of this city, together with a growing share of well qualified and highly educated migrants, has also resulted in a compositionally beneficial development. Together, these developments have cushioned the aggravation of poverty hazards and the shrinking of the middle class. Moreover, in view of employment intensity, the increase in part-time employment caused accumulated poverty hazards over the period under investigation. The increase in employment among highly qualified employees and the decline in unskilled work between 2003 and 2013 attenuated the growth of lower income classes. In sum, the change in the composition of the migrant population would have had an inequality-reducing effect. However, this was counteracted by changes in the labour market-related factors, as discussed above.[21]

Table 5 summarises the results of other binomial logistic regression models. These models serve to explain the difference between people with and without migrant backgrounds (and between the first and second generations) in 2013. Again, people from migrant backgrounds were more frequently allocated to lower income classes, and especially first generation migrants (Model B1). Differences between people with and without migrant backgrounds can to a limited extent be attributed to differences in education or industry affiliation (cf. Model B1 with Model B2).[22] These differences lessened once these characteristics were controlled for, yet remained statistically significant.[23] The models and tests presented in Table A.4 (see S1) also show that the *effects of individual characteristics* (education, occupational status, gender, age, etc.) *upon one's position within stratification structures* were comparable among people with and without migrant backgrounds.[24]

Finally, Model B3 presents another separate model for individuals from migrant backgrounds, taking into account language skills, among others. Such skills were shown to be decisive factors in social advancement, thus confirming findings from previous research (Esser, 2004; Ours & Veenman, 2003). The lower their language skills were, the greater the likelihood of lower income affiliation. Differences between the first and the second generation (or between Austrian citizens and noncitizens) were no longer relevant after controlling for language skills, as well as other factors, such as education,

[20]For example, with more university graduates in 2013 than in 2003, this composition of the population with migrant backgrounds should have had a positive (beneficial) effect on the risks of being affiliated with lower groups of the stratification system.

[21]Decomposition analyses with alternative measures of Viennese social stratification and varying specifications confirm this key finding.

[22]Industrial affiliation had consequences, as expected: Unlike employment in trade and the hospitality industry, employment in highly specialised fields, such as financial and other economically oriented services, resulted in markedly improved chances not to be allocated to classes of the income distribution below the middle. The findings corroborated the theoretical argumentation in Section 3.

[23]According to tests along the lines of the KHB method, the differences between natives and the first/second generation were not as large in Model A2 as in Model A1 ($p < 0.001$ in both cases).

[24]Other sensitivity analyses, using occupational classes based on the ISCO-classification (Atkinson & Brandolini, 2011; Hamnett, 2015), confirm our major findings discussed in Table 5 (see S1, Table A.6).

occupational status, and trade.[25] The intergenerational differences may thus be explained by these factors.

6 | CONCLUSION

International research has so far paid relatively little attention to migration as a key dimension of the transformation of the urban stratification system. The present article has addressed this research gap by exploring the decline of migrants from the middle of society in the city of Vienna. Using a rich data source, we generated a number of important findings which should be related to the three major theses on the transformation of urban social stratification discussed in the theoretical part of our paper.

First, we showed that the stratification structure of the native population is largely stable in Vienna when using data on the household income distribution which includes transfers from the welfare state. This corresponds with a shrinking of the middle class within the occupational stratification for Austrian natives. At the same time, the share of middle class groups has clearly decreased among the migrant population (both within the household income distribution *and* the occupational class system).

Second, an explanation for Vienna's complex social stratification transformation cannot be based on just one theoretical proposition. For example, our empirical findings clearly support key assumptions of the polarisation thesis, especially if one focuses on the transformation of migrant stratification. However, a key argument of the middle-class expansion thesis—referring to professionalisation tendencies within the occupational class system of Austrian natives—applies to Vienna as well. We would argue that our findings on social and spatial inequalities support the "role of the state thesis" as well. This is evident from the higher stability of the middle class within the household income distribution and within large scale housing constructed by the municipality.

Third, turning to the micro logic of the transformation of Viennese stratification, our analyses show that not only is migration-specific change responsible for a social decline among those from migrant backgrounds, but so too are developments in education and employment-related factors. Today, most migrants in Vienna are effectively EU citizens who have noticeably higher educational levels than was the case 20 years ago (MA 23, 2017). Our multivariate analyses illustrated that this finding is highly relevant for the development of social stratification: The migrant middle class would have shrunk even more had immigration not been Europeanised.[26] However, this process was counteracted by transformations in the labour market, including an increase in part-time employment and the loss of protection from social decline for intermediate qualifications. Thus, a variety of displacement effects are presumed to be developing in the labour market. Furthermore, we showed factors such as education, occupation,

gender, age, language skills, and industry affiliation to merely explain a part of the differences between Austrian natives and migrants' class affiliations. This is an important finding and gives rise to the issue of discrimination in Vienna (Sievers et al., 2014).

In the end, one can assume that the decline of migrants from the middle of Vienna's society is yet another example of an overall European development. Migrants are among those most strongly affected by the financial crisis in Europe (European Commission, 2016), and is also the case in Vienna, where almost 40% of all unemployed individuals are foreign citizens and almost half of the population of the city has a migrant background (AMS, 2016).

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[25]Tests based on the KHB method explicitly showed the difference between the first and second generation to decrease if further variables are considered ($p < 0.001$).

[26]Corresponding with migration literature, our results suggest that EU-15/10 migrants are much better positioned in the Viennese stratification than Turkish or ex-Yugoslav migrants. This may largely be explained by their higher levels of education, labour market integration, and language skills. Whether culture (including religion, social skills, language) is additionally relevant has, however, not been finally conclude with our available data (this could be a topic for further research which considers that culture is correlated with both region of origin and education).

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