Female Migrant Entrepreneurship in Germany: Determinants and Recent Developments



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Abstract Although female migrant entrepreneurship has gained some momentum during the last decade, research on it is limited, and empirical findings in the German context remain scarce. The entrepreneurial activities of female migrants have long been ascribed to certain industries. Their businesses often remain small with limited prospects for revenue. However, recent developments indicate some emerging changes in terms of female migrant entrepreneurship. Based on the empirical data of the German microcensus, we analyze structural characteristics of female migrant entrepreneurship and its development in Germany between 2005 and 2016. We further examine how selected determinants (qualification, occupational segregation, family responsibilities) can explain these developments, and how these determinants affect the propensity of female migrants to become self-employed. Our findings cast new light on country-specific aspects of female migrant entrepreneurship and how entrepreneurial activities of female migrants and selected determinants differ from their native counterparts.

1 Introduction

Entrepreneurial activities of female migrants have long been perceived in light of their subordinate position or patriarchal control mechanisms (e.g. unpaid or underpaid workers in their husbands' businesses) (Baycan-Levent 2010). Previous literature indicates that female migrants in Germany and other OECD countries tend to become self-employed in specific industries (e.g. cosmetics, fashion, office services)

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¹Because previous literature has not been able to accurately separate the two, we use the terms *entrepreneurship* and *self-employment* in our literature review synonymously. *Entrepreneurship* is commonly used in international literature, whereas *self-employment* is predominantly used in studies relying on the German context. This also accounts for the terms *immigrant* (international

where their businesses often remain small and revenue prospects are limited (Baycan-Levent 2010; Leicht et al. 2017). The overrepresentation of female migrants in certain sectors is possibly the result of educational and occupational choices/opportunities (Leicht and Lauxen-Ulbrich 2005). The entrepreneurial activities of female migrants are further shaped by ethnic as well as gender-based barriers and opportunities (Azmat 2013; Bührmann et al. 2010a). Female migrants might be able to combine these opportunities, which can foster their entrepreneurial activities. Or, they are doubly impacted by barriers, placing them at a disadvantage when starting their own business. International literature on migrant entrepreneurship recently stated that female migrant entrepreneurship has been subject to significant changes (e.g. the number of female migrant entrepreneurs is rising and their entrepreneurial activities in knowledge-intensive services are increasing). These changes indicate a slightly different positioning of entrepreneurial activities of female migrants that is related to strong potential in terms of socio-economic cohesion and integration (Baycan-Levent 2010).

Research on the entrepreneurial activities of female migrants gained its initial momentum during the last decade. It still however cannot be considered comprehensive. Extant literature focuses on the motivations, enablers and barriers of female migrant entrepreneurship (e.g. Bührmann 2010; Leicht et al. 2009; Pio 2007). A multitude of studies use a qualitative research design (e.g. Dannecker and Cakir 2016; Essers et al. 2013; Munkejord 2017) or aim at theorizing the phenomenon and/or conceptualizing the research field (e.g. Azmat 2013; Baycan-Levent 2010; Essers et al. 2010; Villares-Varela et al. 2017). Quantitative approaches remain scarce. From a European perspective, recent studies have predominantly focused on a particular country or migrant group from a specific country of origin (e.g. Baycan-Levent et al. 2003; Dhaliwal et al. 2010; part IV in Halkias et al. 2011). A comprehensive overview on the European level or cross-country comparisons are lacking. In addition, only very few studies focus on Germany (e.g. bga 2010; Bührmann et al. 2010b; Hillmann 1999; Leicht et al. 2009). Therefore, it is questionable whether existing findings and insights on an international level also apply to the German context.

In light of the above, our chapter relies on data from the German microcensus to focus on female migrant entrepreneurs in Germany. The chapter provides quantitative insights of female migrant entrepreneurship in Germany with a particular focus on recent developments and selected determinants. Following a quantitative approach and including the gender dimension of migrant entrepreneurship in Germany, we shed light on a topic that has received only limited scholarly attention. We position our chapter in the realm of migrant entrepreneurship, taking an intersectional approach combining gender and ethnicity.

literature) and *migrant/migration background* (German context). A consistent and generally accepted definition is missing for *migrant entrepreneurship* (Ram et al. 2017). We therefore base our definitions of migrants and self-employment on the German microcensus (see Sect. 3 for further details).

The objectives of our study are twofold. First, we aim at analyzing the structural characteristics of female migrant entrepreneurship and its development in Germany between 2005 and 2016. Second, we examine to what extent qualification, occupational segregation, and family responsibilities can explain these developments, and how these determinants influence the propensity of becoming self-employed among female migrants. By focusing on the differences between female migrant entrepreneurs and female entrepreneurs of German origin, we further consider whether female migrant entrepreneurs face other self-employment opportunities and barriers than their native counterparts. Thereby, our findings cast new light on country-specific aspects (Germany) of female migrant entrepreneurship and draw some initial attention to the debate of whether female migrant entrepreneurs face a double barrier of being both women and migrants.

After a brief review of the literature, we discuss selected determinants of female migrant entrepreneurship (qualification, occupational segregation, family responsibilities) followed by methods and descriptive as well as multivariate results. The chapter concludes with a brief discussion of the results, limitations and avenues for further research.

2 Female Migrant Entrepreneurship

2.1 Women's and Migrants' Entrepreneurship

From a European perspective, the underrepresentation of women in self-employment is a consistent finding (Hatfield 2015). This gender gap, although Europe-wide, is not necessarily a worldwide phenomenon. In some countries (e.g. Brazil, Indonesia, Mexico, the Philippines, Vietnam), entrepreneurial activities of women are on the same level of or even exceed those of men (GERA 2017). In Europe, the proportion of self-employed men (among all employed people) is considerably higher (2016: 17.5%) than that of self-employed women (2016: 9.9%) (OECD 2017). This gender difference also holds true for Germany. Here women continue to be less present in self-employment. Even though the number of female entrepreneurs has in fact increased over the past years, the self-employment rate of women has remained consistently low, and is still lower than for men. Nevertheless, a slight harmonization of the self-employment rate has occurred between men and women. This might be rather the result of a small decrease in the male self-employment rate than an increase in the female self-employment rate (bga 2015; Neuffer 2015). Overall, female and male entrepreneurial activities range among a lower level in Northern European countries (Germany included) than in Southern and Eastern Europe (Hatfield 2015). Comparing the ratio between male and female self-employment rates in different European countries, Germany ranks among those with a relatively small gap (ibid.).

Businesses owned by women are often found in traditionally female dominated industries (e.g. personal services, fashion, office services) and tend to be less innovative, smaller in size, less prone to grow, and less internationalized than businesses owned by men (Niefert and Gottschalk 2015; Strohmeyer et al. 2017).

Researchers have extensively examined these gender differences in self-employment. Various international studies describe the characteristics and performance aspects of women-led businesses (e.g. Bijedić et al. 2016; bga 2015; Brink et al. 2014; Niefert and Gottschalk 2015; Strohmeyer et al. 2017), while further studies focus on individual and contextual factors that determine the likelihood, entry points, and motives of women's self-employment (e.g. Hughes 2003; Lauxen-Ulbrich and Leicht 2003; Leoni and Falk 2010; Kay et al. 2014; McManus 2001; Neuffer 2015). Other scholars conceptualize women's entrepreneurship by drawing on theoretical perspectives derived from gender studies (e.g. Brush et al. 2014; Ettl and Welter 2010; Gupta et al. 2009; Henry et al. 2016; Marlow 2015).

Several factors and characteristics have been identified as influencing the entrepreneurial activities of women. These include human capital (i.e. qualification and education), gender-specific occupational choices, family responsibilities, and family-related employment interruptions (Kay et al. 2014; Leicht and Lauxen-Ulbrich 2005; Leoni and Falk 2010).

The influence of gendered socialization and education processes is also considered in some studies. Self-perceptions of desirability and feasibility of entrepreneurial activities are shaped by gendered self-conceptions and stereotypes, which essentially influence the "perceptions of and intentions to become an entrepreneur" (Gupta et al. 2009, p. 412f.).

Looking at the characteristics and determining factors of women's entrepreneurship, it becomes obvious that some apply to migrant entrepreneurs as well (see Baycan-Levent et al. 2003 for an extensive comparison). Similarities can be found regarding the characteristics of the business (e.g. service sector, small size, low capital) and the characteristics of entrepreneurs (e.g. lack of integration in the labor market, irregular career paths, fewer opportunities/resources) (Apitzsch and Kontos 2003; Baycan-Levent et al. 2003). Along with the relevant studies on migrant entrepreneurship in Germany (e.g. Bührmann et al. 2010b; Brüderl et al. 2009; Fertala 2006; Hillmann 2011; Leicht 2016; Leicht et al. 2015, 2017; Sachs et al. 2016; Schaland 2010), international migrant entrepreneurship research looks back on a long tradition. Its main theoretical frameworks include the middle man minorities approach (Bonacich 1973), the interaction model approach (Waldinger et al. 1990) and the mixed embeddedness approach (Kloosterman et al. 1999). However, these "classics" of ethnic economy theory have very "little consideration of gendered patterns of migration, labour [sic] incorporation or family relationships within the household" (Villares-Varela et al. 2017, p. 344f.).

But what about entrepreneurs who fit into both categories, i.e. those who are women *and* migrant entrepreneurs? Only very few studies focus in particular on female migrant entrepreneurs (Azmat 2013), and little is known about the ethnic aspects of female entrepreneurship in Germany (Leicht et al. 2017). The long-shared belief that the number of self-employed migrant women is negligibly small, and the

assumption that women were "tag-alongs" in a migration dominated by men might explain this lack of scholarly attention (Baycan-Levent 2010).

It's relevant and essential to focus on female migrants as a particular group of entrepreneurs for at least two reasons. First, the percentage of self-employed female migrants in Germany and Europe has increased significantly in recent years (LFS, own calculations). In Germany, migrant women appear less underrepresented in self-employment than native women (Neuffer 2015). The question therefore arises of whether this growth relates to a change in structures and characteristics of female migrant entrepreneurship in Germany. Second, female migrant entrepreneurs have transformed from being (unpaid) helpers within their family's businesses to being entrepreneurs in their own right (Baycan-Levent 2010; Leicht et al. 2017).

Looking at some statistical trends and developments of (female) migrant self-employment in the EU, the following can be stated²: Overall, migrant entrepreneurship in Germany and other European countries has gained traction over the last decade, although the increase in entrepreneurial activities of migrants occurred in Germany on a lower level than in other EU-28 countries. Gender differences nevertheless exist. First, more migrant men than women are self-employed, also reflected in the 2016 self-employment rate in both Germany (male migrants: 12.1%, female migrants: 7.3%) and EU-28 countries (male migrants: 15.3%, female migrants: 9.2%). Second, in Germany (male migrant increase of about 25.1%, female migrant increase of about 31.1%) as well as in EU-28 countries (male migrant increase of about 66.2%, female migrant increase of about 90.2%) the number of female migrant entrepreneurs has risen more than the number of their male counterparts between 2005 and 2016.

2.2 Literature on Female Migrant Entrepreneurship

Female migrant entrepreneurs received some scholarly attention at the beginning of the 1990s (e.g. Hillmann 1999; Dallalfar 1994; Kermond et al. 1991; Morokvasic 1991). Research has however only gained real momentum during the last decade. It remains scarce, and female migrants are less visible as entrepreneurs than their male counterparts (Verduijn and Essers 2013).³

²Displayed trends rely on own calculations based on the Eurostat Labor Force Survey (LFS) (EU-28; years 2005–2016). Due to different classifications of nationals/foreigners in the LFS, the results of the LFS are only partially comparable to analyses based on the microcensus. See Sect. 3 for further details.

³Our literature review was conducted using the following keywords (and selected combinations): migrant, immigrant, women, female, entrepreneur, entrepreneurship, *Migrantin*, *selbständig*, *Selbständigkeit, Existenzgründung, Gründerinnen mit Migrationshintergrund*. These were done in the literature databases of Google Scholar, IBZ Online, Web of Science and WISO. Our strategy was twofold: (1) literature research for the German and international context (focusing on the latest publications in English or German), and (2) screening and selecting the available literature in terms of our research objectives.

Several studies focus on the motivation(s) of migrant women to become self-employed (e.g. Baycan-Levent et al. 2003; Baycan-Levent 2010; Leicht et al. 2009; Munkejord 2017; Pio 2007). Blocked career advancement in terms of dependent employment ("glass ceilings"), a desire for (financial) independence, entrepreneurship as an alternative to unemployment, and the individual intrinsic wish to become an entrepreneur are all seen as motives in these studies.

The factors fostering or impeding female migrant entrepreneurship form another stream of literature (e.g. Anthias and Mehta 2008; Azmat 2013; Baycan-Levent et al. 2003; bga 2010; Leicht et al. 2009). Baycan-Levent et al. (2003) introduce a useful framework for categorizing opportunities and barriers; these are also found in the studies referenced above. This framework distinguishes between ethnic-based and gender-based barriers, as well as opportunities to visualize effects that apply to migrants and women. It helps to conceptualize the question of whether female migrant entrepreneurs are able to combine opportunities, or are instead doubly affected by barriers. The existence of a special market or demand for female services, specific management styles, the existence of informal information networks, and potential competitive advantages offered by the ethnic community are included among the factors that can foster the entrepreneurial activities of migrant women. Inhibiting factors here include among other things a lack of capital and credit, a lack of financial and managerial knowledge, cultural and social values, lacking qualifications and language proficiency, family responsibilities, and exclusion from "nonethnic" or "old-boys" business networks. Azmat (2013) introduces another theoretical framework. She considers social capital, human capital, culture, family, gender, and institutional factors which might serve as barriers and in some cases as enablers of female migrant entrepreneurship. Interestingly, both frameworks neglect occupational segregation as influential factors.

These frameworks pinpoint two questions related to female migrants: Is gender or ethnicity more relevant with regard to entrepreneurial activities? Or is there a dual disadvantage? Several studies emphasize that migrant women are affected by a dual disadvantage because of their gender and migration background (Baycan-Levent 2010; Bührmann et al. 2010a). Moreover, some authors criticize how research has so far failed to acknowledge the interplay between these two factors, separately focusing instead on one or the other. And "[I]acking is the understanding of the *interaction* between gender and ethnicity" (Villares-Varela et al. 2017, p. 344, emphasis in original). To conceptualize this idea, some studies use the approach of intersectionality to overcome the lack of a comprehensive argumentation that addresses gender, ethnicity, and entrepreneurship (e.g. Essers et al. 2010; Knight 2016).

2.3 Determinants of Female Migrant Entrepreneurship

Previous research has identified various determinants which might influence the entrepreneurial activities of individuals. Research on women's entrepreneurship emphasizes three sets of determinants: human capital, occupational segregation,

and family responsibilities (see for example McManus 2001; Leicht and Lauxen-Ulbrich 2005). Determinants might have a different influence on entrepreneurial intentions and activities in various contexts. The importance of the contextual embeddedness of entrepreneurship is widely considered in the field of entrepreneurship research (e.g. Díaz-García et al. 2016; Welter and Gartner 2016a). It helps to understand "when, how, and why entrepreneurship happens and who becomes involved" (Welter 2011, p. 166).

Female migrant entrepreneurship occurs in various contexts and is shaped by several (intersectional) determinants that subjectively and objectively affect entrepreneurship in different ways depending on the social, spatial, institutional and temporal context (Welter 2011; Welter and Gartner 2016b). Drawing on the notions of intersectionality and context, we consider how gender and migration background shape the above-mentioned determinants of migrant women's entrepreneurial activities in Germany.

2.3.1 Qualification

Research on early ventures considers education and practical knowledge as key determinants of self-employment (Brüderl et al. 2009). Qualifications and managerial experiences are part of the individual human capital needed to start and run a business (Azmat 2013; Leicht et al. 2009). Any lack thereof is considered as one of the main obstacles to self-employment and business success. In their framework of obstacles and enablers, Baycan-Levent et al. (2003) consider a lack of education to be an ethnic-based obstacle. Migrant women often have fewer chances to acquire formal qualifications or job experience. They may face educational inequalities in their country of origin because of their gender, which might lead to fewer opportunities to gain additional (formal) human capital. Upon arriving in their host country, migrants often experience a certain devaluation of their human capital acquired abroad (Azmat 2013; Collins and Low 2010). The unique structure of the German vocational education system marks another challenge, because here, the formal recognition of foreign qualifications is quite difficult. Even so, some studies indicate that self-employment (in comparison to dependent employment) represents an opportunity to better utilize qualifications that are not formally recognized (e.g. Leicht et al. 2017).

Migrant women born in Germany often face disadvantages in the education system because educational opportunities and success (on both school and vocational levels) are highly influenced by social and ethnic backgrounds (Kristen et al. 2011; Schneider et al. 2014). Some studies point to further discrimination on the labor market, in particular for migrant women with foreign-sounding names or who wear head coverings (Weichselbaumer 2016), perhaps limiting their opportunity to attain work experience.

Unequal opportunities offer fewer possibilities for migrant women to acquire quality levels of human capital. This is why we consider qualification as a relevant determinant in our analyses.

2.3.2 Occupational Segregation

Although some integrated occupations do in fact exist, the majority of occupations worldwide are dominated by either men or women (Busch 2013). The occupational structure in Germany is highly segregated. This has not changed significantly, even though women's labor market participation has increased and a fundamental change in the structure of occupations has occurred (Hausmann and Kleinert 2014). Female dominated occupations are represented in the trade or personal service sectors as well as the social and health care sectors. Male dominated occupations are characterized by a stronger technical focus and often include manual labor (Busch 2013; Hausmann and Kleinert 2014).

Gender-specific occupational and industrial segregation is primarily related to the field of (migrant) female entrepreneurship. It is perceived as a main obstacle to self-employment access. The field of study or occupational choices determine the possibilities of becoming self-employed, with some industries being more suitable for entrepreneurship than others (Leicht and Lauxen-Ulbrich 2005). A high proportion of migrant women choose traditional women's professions/occupations, reducing their chances of founding a business because these professions are less suitable for self-employment (Leicht et al. 2017). Brink et al. (2014) emphasize how this also influences the innovativeness of a business venture (see also Leoni and Falk 2010). This gender-specific division is even mirrored among established firms led by migrant women which often operate in the service sector (Baycan-Levent 2010).

Occupational choices and specifications indicate different opportunities for selfemployment. Accordingly, we consider occupational segregation as a significant determinant in our analyses.

2.3.3 Family Responsibilities

Recent literature discusses family responsibilities and professional entrepreneurial activities of women from two perspectives: as an obstacle and enabler of entrepreneurship (Leicht et al. 2017). Family care is still predominantly done by women, and this doesn't change when women are employed full-time. Family care is an addition to employment that increases the overall workload (Baycan-Levent 2010; Leicht et al. 2017). It is argued on the other hand that self-employment offers flexible working conditions (e.g. in terms of time management and workplace location) and is therefore more suitable for an effective work-family balance (Leicht and Lauxen-Ulbrich 2005). "Family balancing" is thus seen as a possible motivational factor for (migrant) women to consider self-employment as an attractive option for their professional careers (McManus 2001).

Having a family or partner can also be supportive when starting or running a business. This support can include moral encouragement and mentoring, financial contributions, or risk absorption (Dhaliwal et al. 2010). Lauxen-Ulbrich and Leicht (2003) find in their study on native women entrepreneurs that family responsibilities

influence the professional activities of women as such but do not necessarily disadvantage entrepreneurial activities. Is this finding also valid for female migrant entrepreneurs in Germany, assuming that migrant women are more affected by family responsibilities than non-migrant women (Henkel et al. 2015)?

It is still not clear whether family obligations tend to foster or hinder the transition into self-employment. Therefore, we focus on the structure of the household and to what extent female migrants differ from women of German origin.

3 Methods

3.1 Sample and Definitions

We base our analyses on the German microcensus, an annual sample survey carried out by the Federal Statistical Office that covers 1% of the German population. The survey contains information on the population (i.e. socio-demographic data) and the labor market in Germany. Information on a person's migration background (*Migrationshintergrund*) has been available since 2005.

Our analyses rely on different sources of the microcensus. First, we use scientific use files (SUF) for the years 2005–2012. The SUF is a 70% anonymized sample of the microcensus and includes information on all employed people between the ages of 15 and 64. Analyses including the years 2005–2012 rely solely on the SUF. Since 2012, the microcensus has used an updated weighting. Consequently, the 2011 microcensus was revised, which is not included in the SUF. Most of our analyses also include the years 2013 and 2014. We completed the SUF for the years 2005–2010, with data for the years 2011–2014 of the research data center (FDZ) at the Federal Statistical Office in Wiesbaden, Germany (our second source of the microcensus). We furthermore use the microcensus subject matter series (*Fachserie*) to integreate the latest available data up to 2016. The microcensus subject matter series base on aggregated data. Therefore, it does not include an upper age limit for people in employment. Due to different sources of the microcensus, results differ regarding the last reported year.

Persons with a Migration Background We draw on the definition of the microcensus for persons with a migration background (*Migrationshintergrund*). The term "person with a migration background" is predominantly used in the German context. "The population group with a migration background consists of all persons who have immigrated into the territory of today's Federal Republic of Germany after 1949, and of all foreigners born in Germany and all persons born in Germany who have at least one parent who immigrated into the country or was born as a foreigner in Germany" (Statistisches Bundesamt 2018a). We do not differentiate between the first and second generation of migrants, nor their country of origin.

Self-Employment We follow the microcensus definition of self-employment. A self-employed person is someone who manages a business as owner, co-owner,

tenant, self-employed craftsman or freelancer. The term self-employment excludes individuals who are in a work relationship/contract with an employer (Statistisches Bundesamt 2018b). We do not distinguish between solo self-employed people, those with their own employees, or between full-time and part-time self-employment.

3.2 Empirical Strategy

Our analyses focus on female migrant entrepreneurs while comparing results in relation to female entrepreneurs of German origin. A comparison with male migrant entrepreneurs as well as with dependent employed individuals is reported only for selected analyses.

We first provide a descriptive overview of the development of self-employment in Germany, focusing particularly on female migrant entrepreneurs. Further descriptive results refer to the level of qualification, industry structure, and occupational segregation as well as the household structure.

Second, we estimate a maximum likelihood regression (logit regression) regarding the propensity to become self-employed with a binary dependent variable (1 = self-employed, 0 = dependent employed). We estimate two separate models for migrant women (Model I) and native women (Model II). Two separate models allow us to depict the relevance of structures and determinants for both groups. The role of qualification, occupational segregation, and household structure is examined, while also controlling for age. We focus on female migrant entrepreneurs, and the results are contrasted to those of female entrepreneurs of German origin.

4 Results

4.1 Development of Self-Employment in Germany Since 2005

The total number of all employed persons and dependent employed individuals in Germany continuously increased during the last decade, whereas the rate of self-employed individuals declined (2005: 11.2%, 2016: 10.0%). A closer look from an origin and gender-specific perspective indicates a slightly different development (see Fig. 1).

Migrant entrepreneurship has gained traction in recent years. Since 2005, the number of self-employed migrants has risen by about 33.3% (increase of about 189,000) while the number of self-employed of German origin has slightly declined (about 3.6% between 2005 and 2016). However, the increasing number of self-employed migrants is not necessarily reflected in their self-employment rate (see Table 1), which has remained stable over time (2005: 9.7%, 2016: 9.0%). It is lower than that of their native counterparts, which has slightly declined since 2005 (2005: 11.5%, 2016: 10.3%).

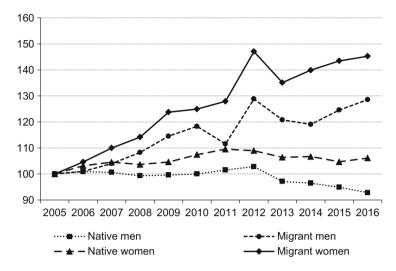


Fig. 1 Self-employed trends by gender in Germany (index base year 2005 = 100%). Source: Federal Statistical Office (microcensus); own calculations

Table 1 Proportion of self-employed (SEP) and self-employment rate

	Migrant			Native		
	1 1000	PROP of SEP	GED (G)	T 1000	PROP of SEP	GED (G()
Year	In 1000	(%)	SEP rate (%)	In 1000	(%)	SEP rate (%)
Women						
2005	167	29.5	6.8	1055	30.2	7.6
2016	243	32.1	6.7	1120	33.1	7.2
Men						
2005	399	70.5	11.7	2442	69.8	14.7
2016	513	67.5	10.8	2267	66.9	13.0

Source: Federal Statistical Office (microcensus); own calculations

The number of women in employment has risen about 17.0% since 2005 (increase of about 2,800,000). This is also reflected in the number of female entrepreneurs, which rose about 10.9% between 2005 and 2016 (increase of about 134,000), whereas the number of male entrepreneurs slightly declined in the same time period (decrease of about 73,000). Nevertheless, the self-employment rate of women remained stable over the last 10 years (2005: 7.5%, 2016: 7.1%), and the entrepreneurial gender gap still exists.

Since 2005, female migrants have shown the largest increase in self-employment. The number of female migrant entrepreneurs has risen significantly by about 45.3% between 2005 and 2016 (increase of about 76,000). This increase is higher than the rise of their male (28.6%) or native counterparts (6.1%). The tremendous development in the number of female migrant entrepreneurs might be explained by its

comparatively low level over the past years (see Table 1). Moreover, the total number of female migrants in employment has risen constantly over the last years. Therefore, the increase of female migrant entrepreneurs is not necessarily related to a "boom" in female migrant entrepreneurs. The self-employment rate of female migrants—a better reflection of self-employment trends—rose slightly between 2005 and 2015 (from 6.8% to 7.1%), almost at the same level as for women of German origin (7.2%). While their self-employment rate remained at the same level (7.2%) in 2016, the rate for female migrants slightly decreased in 2016 (6.7%).

Nevertheless, the self-employment rate of male migrant entrepreneurs (2005: 11.7%, 2016: 10.8%) is considerably higher than the one of their female counterparts. Accordingly, gender-specific inequalities also apply for migrants, and the so-called gender gap regarding self-employment rates still exists for both migrant and native entrepreneurs.

4.2 Structural Characteristics of Female Migrant Self-Employed

4.2.1 Qualification

Qualification and (professional) experience are important resources for the transition into self-employment. Migrant women have a higher qualification level both in self-employment and dependent employment compared to their male counterparts. More than a third of female migrant entrepreneurs (36.4%) have a university degree or a degree from a university of applied science (see Fig. 2) which corresponds to the proportion of self-employed German women (35.2%). The proportion of self-employed male migrants with a university/university of applied science degree is considerably low (23.3%). In contrast, the proportion of female migrant entrepreneurs without a vocational qualification is lower than the one of their male counterparts (23.9% vs. 29.0%). Nevertheless, the proportion of female migrant entrepreneurs without a vocational qualification is quite high, which becomes particularly evident when compared to self-employed women of German origin (6.8%).

A closer look at the distribution of qualifications (see Fig. 2) and their development indicates that the proportion of female migrant entrepreneurs without a vocational qualification has slightly declined since 2005 (2005: 26.4%, 2014: 23.9%). In addition, the proportion of migrant women holding a university degree has increased (2005: 28.1%; 2014: 30.9%). This development also applies for self-employed women of German origin, with a slightly higher increase of individuals with a university degree (2005: 22.5%, 2014: 27.5%).

The level of qualification is also related to the self-employment rate, while a higher qualification level indicates a higher self-employment rate (not shown in Fig. 2). Self-employment rates of female migrants holding a university degree (15.0%) or master craftsman's/technician's qualification (21.8%) are quite high as

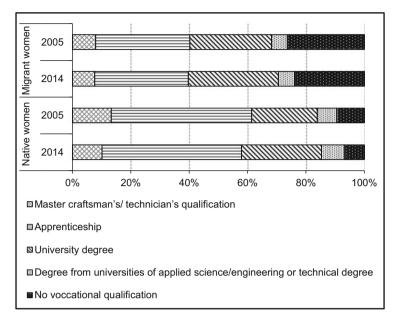


Fig. 2 Distribution of self-employed women (aged between 15 and 64) across qualifications. Source: Federal Statistical Office (microcensus); own calculations

opposed to lower qualification levels. Female migrants without vocational qualification show the lowest self-employment rate (5.4%).

Summing up, the level of qualification appears to be of significance for female migrant entrepreneurship. The role of qualification is further examined below under control of other influencing factors.

4.2.2 Industry Structure

The qualification level of female migrants corresponds to the allocation of female migrant businesses across various industries. In this regard, we might obtain more insight into how and to what extent female migrant entrepreneurs are able to use their (higher) qualifications, and how this is reflected in their distribution across industries.

Most self-employed female migrants work in non-knowledge-intensive services (40.5%) (see Fig. 3). The share of self-employed women of German origin in non-knowledge-intensive services is also on a relatively high level (31.6%), although most of them work in knowledge-intensive services (42.0%). The proportion of male migrant entrepreneurs in non-knowledge-intensive services is comparatively low (15.6%). Non-knowledge-intensive services are often comprised of traditionally female dominated professions (e.g. including household and personal services),

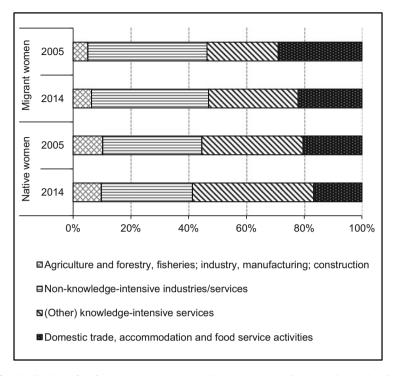


Fig. 3 Distribution of self-employed women (aged between 15 and 64) across industries. Source: Federal Statistical Office (microcensus); own calculations

which explains the overall high proportion of women in non-knowledge-intensive services.

Compared to their male counterparts, the higher qualification level of female migrants is reflected in their distribution across corresponding industries. Female migrant entrepreneurs work more frequently in knowledge-intensive services (31.0%) than their male counterparts (19.7%). Nevertheless, the share of female migrant entrepreneurs in knowledge-intensive services is significantly lower than that of their native counterparts (42.0%). Female migrant entrepreneurs (22.1%) are also quite active in the sectors of domestic trade, accommodation, and food service, while self-employed women of German origin are less represented in these industries (16.7%). Self-employed female migrants are rarely active in the sectors of construction, manufacturing, agriculture, forestry, and fishing (6.4%), while most male migrant entrepreneurs work in these industries (34.0%).

Two interesting observations can be made regarding the development of the industry structure. First, a stronger orientation of female migrant entrepreneurs is seen towards knowledge-intensive services (increase from 24.6% to 31.0% between 2005 and 2014). Second, a slight decline is seen in female migrant self-employment in traditionally migrant dominated industries such as domestic trade,

accommodation, and food services (decrease from 29.0% to 22.1% between 2005 and 2014). These developments might be a first indicator of a modernization of female migrant entrepreneurship. In total, the distribution of female migrant entrepreneurs across non-knowledge-intensive services as well as agriculture and forestry, fisheries, manufacturing, and construction has remained quite stable.

4.2.3 Occupational Segregation

Various professions/occupations offer different opportunities regarding the transition into self-employment. The following considers occupational segregation and its implication for the self-employment opportunities of female migrants.⁴

Female and male dominated occupations are not equally distributed across the overall economy, which also applies to the distribution of occupations among female migrant entrepreneurs (see Table 2). They work most frequently in female dominated occupations (67.1%). This is also evident for female entrepreneurs of German origin on a slightly lower level (61.6%). One third of female migrants pursue their entrepreneurial activities in integrated occupations (29.6%), which is also true for self-employed native women (30.8%). The proportion of female migrant entrepreneurs in male dominated occupations is quite low (3.3%), and slightly higher for self-employed women of German origin (7.6%). ⁵

Differences for female and male dominated as well as integrated occupations are also depicted in the self-employment rates of female migrants (see Table 2). Female dominated occupations do not offer favorable conditions for female migrants to found a business, which is mirrored in the low self-employment rate in these occupations (7.0%). The same holds true for women of German origin (6.4%). As opposed to this, integrated occupations seem more favorable in terms of self-employment because of their higher self-employment rate (9.9%). For women of German origin the self-employment rate in these occupations is slightly lower (9.2%). Male dominated occupations indicate alow self-employment rate for female migrants (2.7%). In contrast, the self-employment rate for women of German origin is much higher in male dominated occupations (7.0%).

Looking at the distribution of occupations by qualification, the following can be observed: The higher the level of qualification, the higher the proportion of integrated occupations. Female migrants with a university degree (among all qualifications)

⁴People in employment are allocated to around 400 occupations in the microcensus (KldB2010). Female dominated occupations are those with a corresponding gender share of more than 15% compared to the gender-specific share of all employees. Here we follow the definition of Hakim (1998) that is also used by Leicht and Lauxen-Ulbrich (2005). We apply KldB2010 based on two digits.

⁵Due to changes in the occupational classification in the microcensus (KIdB92/KIdB2010), it is not possible to present a consistent time series regarding the development of occupational segregation. The development can either be displayed for the years 2005–2012 (SUF data) or for the years 2011 to 2014 (FDZ microcensus), which is further related to a slightly different representation of results.

	Migrant women		Native women	
Occupations	SEP (%)	SEP rate (%)	SEP (%)	SEP rate (%)
Female dominated occupations	67.1	7.0	61.6	6.4
Integrated occupations	29.6	9.9	30.8	9.2
Male dominated occupations	3.3	2.7	7.6	7.0
Total	100.0	7.3	100.0	7.1

Table 2 Occupational segregation for self-employed (SEP)^a

Source: Statistical Federal Office (microcensus 2014), own calculations based on KIdB2010, two digits

indicate the highest proportion of integrated occupations (49.0%). In contrast, those with an apprenticeship qualification display the highest proportion of female dominated occupations (79.0%).

In conclusion, the type of occupation appears decisive for the low level of selfemployed female migrants. The role of occupational segregation is further examined under control of further influencing factors.

4.2.4 Household Structure and Family Responsibilities

Family responsibilities are discussed as both enablers and barriers for selfemployment within existing research. The structure of the household is considered below.

More than half of self-employed female migrants (52.5%) live with at least one child in the household (couple household with children and single parents) (see Fig. 4). Self-employed female migrants are more likely to live in couple households with children than their native counterparts (41.4% vs. 37.1%). Further differences for couple households are stated in terms of the children's age. Self-employed female migrants live more often with younger children (<12 years: 23.2%) than with older children (≥12 years: 18.2%). For self-employed women of German origin, only a small difference regarding children's age (<12 years: 17.7%, ≥12 years: 19.4%) applies. Gender-specific differences are particularly evident for single parents. Self-employed female migrants are twice as often a single parent than their male counterparts (11.0% vs. 4.0%). The proportion of single parents among self-employed native women is nearly the same (10.0%) than among female migrant entrepreneurs.

A slight decline of couple households with children has been observed since 2005. This development applies to female migrant entrepreneurs (2005: 46.0%, 2014: 41.4%), female entrepreneurs of German origin (2005: 42.7%, 2014: 37.1%) as well as to male migrant entrepreneurs (2005: 53.5%, 2014: 46.5%). The share of self-employed female migrants living in single households with older children (\geq 12 years) slightly increased (2005: 4.3%, 2014: 6.7%) which applies to native women as well (2005: 5.4%, 2014: 6.4%).

In conclusion, female migrant entrepreneurs bear family responsibilities more frequently than self-employed women of German origin. The structure of the household as well as the role of children in the household will be further examined

^aAged between 15 and 64

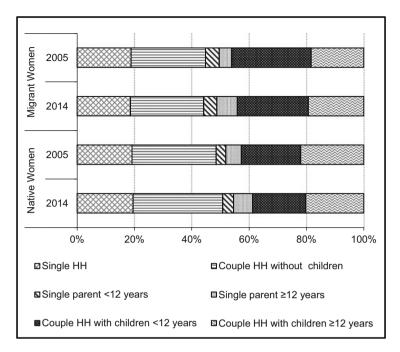


Fig. 4 Household (HH) structure of self-employed women (aged between 15 and 64). Source: Federal Statistical Office (microcensus); own calculations

under control of other influencing factors. Multivariate analyses also include the category "other types of households", which is available in the microcensus 2014, but not for 2005.

4.3 Multivariate Results

Descriptive results provide first insights about female migrant entrepreneurs in Germany along with various related structural characteristics. However, it is still questionable to what extent these determinants as well as further factors influence the propensity for female migrants to become self-employed. Accordingly, under control of other factors, we estimate a logistic regression with a binary variable as our dependent variable (1 = self-employed, 0 = dependent employed). The resulting coefficients, reflected as odds ratios (indicated as Exp(B)), are interpreted as the propensity to be self-employed. Moreover, we examine whether various determinants differ between female migrants and women of German origin.

In our regression model, we consider occupational segregation and the type of household (including children) as the most relevant determinants for female migrants' self-employment. Age and education are included as further factors of influence and control. The results of the binary logit models are displayed in Table 3 for female migrants (Model I) and for women of German origin (Model II).

Table 3 Influence of determinants on propensity for self-employment of women^a

Table 5 influence of determinants on propensity for sen-empi	-	
	Model I	Model II
	Migrant	Native
Demondent americand 0	women	women
Dependent employed $= 0$ Self-employed $= 1$	Logit-	Logit-
- ·	coefficient	coefficient
Age	1.029***	1.041***
	(0.003)	(0.001)
Type of household		
Other (ref)		
Single HH	1.457***	1.077***
	(0.124)	(0.061)
Couple HH without children	1.181	0.979
	(0.121)	(0.060)
Couple HH with children <12 years	1.698***	1.478***
,	(0.116)	(0.061)
Couple HH with children >12 years	1.226*	1.179
_ ,	(0.125)	(0.062)
Single HH with children <12 years	1.684***	1.769***
	(0.162)	(0.081)
Single HH with children ≥12 years	1.272*	1.097
Single 1111 with emission = 12 years	(0.145)	(0.071)
Qualification		
No formal qualification (ref)		
Apprenticeship	0.859**	0.975
	(0.068)	(0.045)
Master craftsman's/technician's qualification	4.325***	2.687***
•	(0.113)	(0.056)
Degree from universities of applied science/engineering or	1.811***	2.087***
technical degree	(0.121)	(0.059)
University degree	2.877***	2.856***
- · · · · · · · · · · · · · · · · · · ·	(0.072)	(0.049)
Occupational segregation		
Integrated occupation (ref)		
Female dominated occupation	0.866**	0.872***
	(0.058)	(0.026)
Male dominated occupation	0.280***	0.911**
<u>r</u>	(0.144)	(0.046)
Constant	0.016***	0.009***
	(0.143)	(0.079)
Observations	23,926	122,595
R ²	0.081	0.071
K	0.081	0.071

Source: Federal Statistical Office (microcensus); own calculations

^{*}p < 0.1; **p < 0.05; ***p < 0.01, standard errors are displayed in parentheses ^aAged between 15 and 64

Previous work experiences are partly reflected in one individual's age. Our results reveal that increasing age slightly increases the propensity for self-employment of both female migrants as well as women of German origin.

With household structure, having children under 12 years increases the propensity of becoming self-employed for female migrants and native women in both couple and single households. However, being a single parent with children younger than 12 years influences entrepreneurial activities for native more than for migrant women. This result might indicate that self-employment is related to a better reconciliation of family and work for female migrants living together with younger children (as well as for women of German origin).

Qualification has the strongest impact on female migrants' entrepreneurial activities. Controlling for type of household and age, holding a craftsman's/technician's qualification highly increases the propensity for female migrants to become selfemployed, followed by a university degree. This also applies for women of German origin, with the effect being higher for female migrants. Having an apprenticeship decreases the propensity for entrepreneurial activities of female migrants (not significant for native women). Controlling for occupational segregation diminishes the influence of qualification. Compared to integrated professions, female dominated professions decrease the propensity of becoming self-employed for female migrants as well as for women of German origin. Male dominated professions also decrease the propensity of entrepreneurial activities for female migrants. This is even the case for women of German origin, although the difference regarding male and female dominated occupations appears stronger for female migrants. We find support that female and male dominated occupations (as well as integrated professions) indicate different opportunities regarding self-employment for female migrants. Integrated professions are most favorable in terms of the entrepreneurial activities of female migrants, while male dominated occupations bear the least opportunities for entrepreneurial activities.

5 Conclusion

Our chapter provides an overview of the development and structural characteristics of female migrant entrepreneurs in Germany, and displays how selected determinants affect entrepreneurial activities.

We show that the number of female migrant entrepreneurs has risen during the last decade—even more than for migrant men and women of German origin. The self-employment rate of female migrants reveals that they are less involved in entrepreneurial activities than their male counterparts (gender gap). Taking up the various structural characteristics and their development, we presented a more concise consideration of female migrant entrepreneurship in Germany, highlighting that qualification is the determinant that matters the most for female migrant entrepreneurs. A high qualification level is most favorable for female migrants in terms of

entrepreneurial activities. Here we confirm previous findings on the relevance of qualification for founding a business (e.g. Brüderl et al. 2009; Azmat 2013).

The high proportion of female migrants holding a university degree (one third) is also reflected in the increasing entrepreneurial activities of female migrants in knowledge-intensive services during the last decade. Nevertheless, a large amount of female migrant entrepreneurs remain active in non-knowledge-intensive services that are often comprised of female dominated occupations. This essentially means that female dominated occupations decrease the propensity of becoming selfemployed for female migrants, while integrated occupations increase it. A different pattern of career choices (including occupational choices) of female migrants may have a distinct effect on female migrants' gender gap regarding self-employment. Female migrants often choose occupations (i.e. female dominated occupations) which lead to dependent employment; this has been observed in previous studies as well (e.g. Baycan-Levent 2010; Leicht et al. 2017). This means that specific measures and programs regarding different career choices for female migrants need to be considered by policymakers. On a conceptual note, and because our results show its high relevance, occupational segregation could be included in theoretical models (e.g. Azmat 2013; Baycan-Levent et al. 2003) examining the barriers and enablers of female migrant entrepreneurship.

When looking at entrepreneurial activities and the determinants of female migrants and women of German origin, it cannot clearly be stated that self-employed female migrants face a dual disadvantage per se. Although the proportion of female migrant entrepreneurs without a qualification is higher than for their native counterparts, both native and migrant female entrepreneurs hold a university degree almost at the same level. In this regard, it is questionable to what extent the lack of vocational qualifications of female migrant entrepreneurs is related to the recognition of their qualification in Germany ("devaluation" described by Collins and Low 2010) or even their missing acquisition of qualifications. Moreover, female migrant entrepreneurship is changing in terms of its activities. For example, we emphasize a slight decline in female migrant businesses in traditionally migrant dominated industries such as domestic trade, accommodation, and food services. Living in a household with young children (single or couple) appears to be an enabler of entrepreneurial activities, not a barrier. This also holds true for both female migrants and women of German origin, a finding previously observed by Lauxen-Ulbrich and Leicht (2003).

Our results reveal that female migrants indicate an increasing growth potential regarding self-employment, which is furthermore related to increasing socio-economic potential in terms of greater social inclusion, revenue and employment opportunities, as well as technological innovation.

Our study relies on the German microcensus, so its results apply only to the German context. Other limitations are found with our data source. Several definitions and statistical classifications are predefined in the microcensus (e.g. self-employment, clustering of industries, qualifications) and do not allow an alternative operationalization of variables. We set our focus on female migrant entrepreneurs as one group, and do not differ between various generations (first/second) or country of origin. Further research

should include these aspects because previous studies have emphasized considering migrant women as a heterogeneous group due to their considerable differences in entrepreneurial activities, socioeconomic characteristics, and qualifications (Azmat 2013; Dannecker and Cakir 2016; Leicht et al. 2017). Our results only indicate some initial insights on the debate of whether female migrant entrepreneurs face a double barrier of being both women and migrants. Further research should tackle this aspect more in depth.

The motives and obstacles (e.g. the role of necessity entrepreneurship) of female migrants to become self-employed could be included in future studies. Additional research avenues could add performance as well as other female migrant business aspects (e.g. innovation behavior, growth expectations, income prospects, ratio of part-time/full-time self-employed). Future research in this area might tackle the question of how changes in the labor market and in the nature of work (e.g. digital transformation related to an occupational shift, loss of significance of manual labor) affect the self-employment of female migrant entrepreneurs. There's no question that a more detailed Europe-wide comparative analysis would reveal new findings and perspectives. In addition, more effort is needed to develop theoretical models which take into account the fact that female migrant entrepreneurship is shaped by the individual experiences of women, migrants, and members of a social class or a certain religion (intersectional perspective).

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