# Main street plot scale in urban design for inclusive economies: Stockholm case studies

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## **Abstract**

This paper explores evidence that entrepreneurial opportunities for migrants and other lower income populations can be expanded in part through increasing the presence of fine grained scales of plots and plates along main streets, as part of a systematic urban design strategy. It describes that systematic strategy herein. The paper encompasses the study of three main streets with varying plot sizes in the inner city of Stockholm, Sweden, and examines the outcomes for different types and scales of businesses. After presenting the findings, analysis and conclusions, larger questions of urban design for more inclusive economies are discussed.

## Keywords

Buildings, structures & design, Social impact, Town & city planning

## Introduction

Recent years have seen a surge of research and policy interest in so-called "main streets" or "high streets" -- that is, streets with a broad range of retail and non-retail activities, often with a relatively high mix of business types and scales, and with a high percentage of smaller, local and independent businesses. As other researchers have concluded, these streets typically offer "centrality", that is, a strategic location for local impact and regional reach (Carmona et al., 2015; Talen & Jeong, 2018). Socially, main streets are at the heart of communities providing place for social interaction, identity and daily shopping (Mehta, 2011). Main streets are also physically the transportation links that connect different parts of the city while functioning as commercial and service clusters, an essential feature of cities of all times (Hillier, 1996). Thus, main streets often play a dual role of offering both mobility and public space (Schönfeld & Bertolini, 2017).

Recent research has demonstrated, however, that in many cities today, the traditional main street is changing as it responds to competition from online shopping, big box retail and shopping malls, and the growing power of the global property market; partly as a consequence, chains are increasingly replacing local businesses on many main streets (Carmona et al., 2015; Talen & Jeong, 2018; Litvin & DiForio, 2014).

Simultaneously, in many European cities, a contrary trend marks the increase of ethnic entrepreneurs on main streets (Carmona et al., 2015, p.7; Hall, 2011, Zukin et al., 2016). A number of researchers have noted the importance of this trend in providing economic opportunities by migrant communities seeking employment and/or entrepreneurial activities (Favell and Hansen, 2002; Hall, 2015; Zukin et al., 2016). What is at stake, they note, is not only the benefits to migrants from participation in the local economic and cultural life of the city, but the economic productivity of the city itself, given the positive contribution of migrants to local economies, the "local multiplier effect" of local entrepreneurial activity and employment, and the upward mobility offered by what the journalist Doug Saunders has termed 'Arrival Cities' (Saunders, 2010; Moretti, 2010; Moretti and Thulin, 2013).

However, research on ethnic entrepreneurship has often neglected the spatial dimension, thereby neglecting the fact that location matters (Rekers & Van Kempen, 2000; Lo & Teixeira, 2015). The value of small, local, independent businesses proves to be strongly linked to spatial dimensions. In fact, according to Rekers and Van Kempen,

"...the spatial structure of the city is important with respect to business premises. In many Western European countries an enormous difference exists between prewar and postwar neighbourhoods. In older neighbourhoods, shops and other enterprises grew up more or less spontaneously around daily markets and in several streets throughout the area. These premises are now being occupied by new users, including ethnic entrepreneurs." (Rekers & Van Kempen, 2000, pp.65-66).

Ethnic entrepreneurs (including immigrants) are typically engaged and embedded in the community, resulting in place management partnerships, community participation, and self-organization (Parker et al., 2014). Within the local community, relatives, acquaintances and/or employees from similar backgrounds tend to be employed in the migrant businesses and use the opportunity to learn entrepreneurial skills (Khosravi, 1999). Ethnic vertical integration also reduces transaction costs (Raijman & Tienda, 2003).

Against this backdrop, the "alterations in scale" of urban morphology, as a "signature" of post-WWII urbanism (Porta et al., 2014), and especially the morphological structure of main streets for diversity of ground floor spaces to provide diversity of ethnic businesses (Vaughan et al, 2017), emerges as a key question. Specifically, one may ask, are there attributes of urban morphology and scale that improve, or conversely degrade, entrepreneurial opportunities for migrants? What businesses tend to be owned by migrants, in what kind of premises, and how have they changed in the past ten years?

 In this research, it is therefore asked, is there a correlation between the scale of plots and/or the plates on main streets, and the evidence of entrepreneurial opportunity and economic productivity by migrant populations? If there is a correlation, can causation be inferred? This

paper examines the specific case studies of three inner city main streets in Stockholm, Sweden, and draws conclusions and discusses topics for further research.

## 2. Plot-Based Urbanism as a conceptual framework

This research builds on the contributions of "Plot-Based Urbanism" (PBU), a conceptual and methodological framework for contemporary urban design and masterplanning. Broadly speaking, Plot-Based Urbanism focuses on the scale of the plot, the plot's relationship with street types and land uses in time, and its critical impact on urban processes including economic, to inform masterplanning practice. An articulation of the place-making approach to urban design (Porta and Romice, 2014), PBU stresses the importance of establishing in places the appropriate spatial conditions for the self-organization of non-spatial dynamics, such as commercial, cultural and social. Self-organization is therefore intended to be complementary, rather than alternative, to spatial planning, as long as the latter is made "time-conscious" (Thwaites et al., 2007). The latest developments of the PBU approach more clearly recognise the evolutionary nature of urban form and, along this line, the primary importance of people's "informal participation" in fuelling the trajectory of change of places (Romice et al., 2017a): by doing so, PBU reconnects past forms of masterplanning that have generated adaptive and continuously successful places over time (Barbour et al., 2016), to the desirable goal of resilient and democratic future cities in the urbanization age (Porta et al., 2018). PBU informs a radical "rethinking the masterplanning practice", in search of a way to design places that understands and embraces continuous evolutionary change rather than conceiving them as untouchable expressions of design *creation* (Romice et al., 2017b; Dibble et al., 2017).

In a PBU perspective, a correct understanding of main streets can make a whole difference in the way future cities are shaped. Evidence has been raised many times in support of the idea that main streets are the backbones of our best urban communities (Porta et al., 2012), and tend to be stable in time (Strano et al., 2012; Strano et al., 2013). Properly structured, fine grained main streets are in fact fundamentally important to the shaping of *resilient* urban communities (Mehaffy et al., 2010): independently controlled plots of appropriate sizes on main streets can meaningfully expand entrepreneurial opportunities and non spatial patterns that are

highly responsive to changing conditions in time. In a parallel relationship to other complex adaptive systems (Holling and Goldberg, 1971), adaptive and resilient places are characterised by five main properties, or "resilience proxies"— namely diversity, connectivity, redundancy, modularity and efficiency—which operate at scale, for example at the plot scale (Feliciotti et al., 2016; Feliciotti et al., 2017). Moreover, "good" places are made of urban elements that are strictly interconnected across scales, in order to allow "panarchic" change enlivening their evolution, in the same way it does to all complex-adaptive systems in nature, culture and the society (Gunderson and Holling, 2002; Holling, 2004). In this sense, resilience thinking reveals to us the crucial importance of the dynamics of change that is investigated in this research, which typically involve different systems (urban form and retail commerce) that are interconnected in space at different scales (plot, street edge, street network). Similar crossscalar patterns have been at the centre of Jane Jacobs' notion of aged buildings as important features of successful streets that provide different levels of access to a broader spectrum of business types (Sardari Sayyar & Marcus, 2013). More plots, in this sense, are more likely to contribute to more diversity of economic activity. As famously noticed in Stockholm by Hall (2009, p.78):

"Investments by private individuals, as we have seen, were necessary if houses were to be built on plots, and 'plot-jobbing' was not regarded as dubious; it was the only option for people with small means, for example, craftsmen and lower white-collar workers, to rise quickly to a higher social and economic level" (Hall, 2009, p.78).

#### "Plots" and "plates"

This study also extends the inquiry beyond plots – that is, legal property lines and/or units of uninterrupted accessibility– and into the plate spaces of buildings, occupied by a variety of individual tenants. For convenience, these spaces are referred to as "plates" (short for floorplates). While there are differences in ownership status between "plots" and "plates", and it is easier to change the boundaries of plates over shorter periods of time, these are differences of degree. It is therefore important to assess the opportunities for migrants as they relate to the scale of both plots and plates.

In both cases it can be asked what relation the size of these structures has to migrant opportunities in Stockholm. It is hypothesized that a more flexible, more adaptive built environment is expected to offer better spatial conditions for accommodating the needs and values of new users, especially startup businesses. This paper focuses on the plot and plate size and ethnic entrepreneurship in particular as proxies of the capacity of space to welcome change by constant adaptation and informal participation.

The research questions, then, are: can a correlation be observed between the scale of plots and plates, and the indicators of migrant economic and social opportunities? Can any reliable evidence be identified that the scale of these structures plays a role? Do new research questions emerge meriting further research?

## 3. Case study background

## 3.1 Background to urban development in Stockholm

Urbanisation occurred in Stockholm at a relatively late stage in the XIXth century (Nyström & Lundström, 2006; Hall, 2009). In anticipation to industrialization and population growth, and inspired by European counterparts such as Haussmann's vision for Paris, the 1866 Lindhagen plan laid out a masterplan including a grandiose street network resulting in the implementation of a rigid street grid, broad thoroughfares and integrated green spaces (Hall, 2009). A national building statute issued in 1874 established that "[s]treets were to be at least 18 metres wide and buildings a maximum of 19.5 meters or five storeys high, but no higher than the width of the street, and [...] that at least one-third of each plot should be left unbuilt as courtyard" (p.78). These codes informed the straightening and widening of the three streets selected for this study: Odengatan, Hantverkargatan, and Hornsgatan. The next large city expansion occurred under the rules of Modern neighbourhood planning in the 1940s (Nyström & Lundström, 2006). Suburban developments were purposefully designed to avoid fine-grained retail commerce, to be replaced by cultural and institutional facilities that were meant to express democratic values and attract social interaction. Thus, the historical inner city, with its street network and retail functions at the ground floor, still remains today the central magnet of consumption and leisure

in Stockholm. Since the 1960s, the focus has shifted from expanding strategies to infill development and consequently densification of developed land (Hall, 2009). Arguably, Stockholm is currently in the midst of the next large city expansion by densification strategies wherein the quality of public space, diversity of people and district identities, and citizen participation are promoted (Stockholms Stad, 2018).

### 3.2 Entrepreneurship in Stockholm and Sweden

Stockholm is a growing city with 17% increase between 2008 and 2017 reaching almost a million inhabitants in the metropolitan area, 24% of which have a foreign background (Statistics Stockholm, 2017). Similarly, Sweden has never seen such a large population, not the least due to influx of immigrants; in 2017, citizens with a foreign background increased with 14% compared to 2016 and its total population increased with 1.2% reaching more than ten million inhabitants (Statistics Sweden, 2018). Observing the past ten years, Sweden has seen a 40% increase in newly registered companies and Stockholm even a 51% increase (Bolagsverket, na). However, looking at small firms, the number of new sole traders as well as totally registered sole traders in Sweden has decreased with 40% which is about the same in Stockholm.

Nevertheless, according to the Swedish Agency of Economic and Regional Growth, particularly migrant entrepreneurs have increasingly started businesses, accounting for 13% in 2012 and 15% in 2014 of the total number of businesses, with a higher share in small businesses (accounting up to 9 employees) (Tillväxtverket, 2013; 2015). Thus, while native sole traders have decreased, migrant sole traders have increased, denouncing that

"the self-employment sector has thus become a source of employment that plays an important role in the assimilation of immigrants" (Hammarstedt, 2004, p.115).

For immigrants in Sweden, it appears harder to find employment on the job market, which makes entrepreneurship often a forced choice. Obstacles such as bureaucracy, access to capital and language and/or cultural barriers are more prevalent among job-seekers with a foreign background (Khosravi, 1999; Tillväxtverket, 2013; 2015). Nonetheless, migrant

entrepreneurs in Sweden tend to have higher ambitions and expectations for the company to grow, specifically in number of employees (Tillväxtverket, 2015).

#### 3.3 The case studies

This study selected streets in three inner city areas of Stockholm, Sweden: Odengatan (Norrmalm), Hantverkargatan (Kungsholmen), and Hornsgatan (Södermalm). See Figure 1. The criteria that led to the identification of the aforementioned three streets for this research are many. Firstly, their strategic location in the inner city of Stockholm, as each street is located in the centre of an area connecting east-west linkages close to well-connected major transportation hubs, and has subways and local and city busses running through. Secondly, the inner city is significantly different from the suburban outer city. Stockholm metropolitan area, as many other European cities, is challenged with unequal living conditions, social and ethnic segregation and unequal availability to services and labour market (Legeby, 2009). In contrast to outer city suburbs, the inner city attributes higher retail diversity in terms of intensity, better internal accessibility as well as to other economic activities; has a self-organizing (market) driven retail system as opposed to the suburban planned (publicly or privately) retail system; a larger size of local market for retail activities; and a higher number of plots (Sardari Sayyar & Marcus, 2013). This arguably creates a reasonable market for retail in the inner city. The perception that ethnic entrepreneurship is restricted to migrant-dense neighbourhoods is not always true, especially not when the targeted clientele is located in the inner city (Lidola, 2014). Furthermore, for the selection of the three streets, the island-structure of the inner city of Stockholm naturally allows for clearly defined areas with distinct identities. Norrmalm (Odengatan) and Kungsholmen (Hantverkargatan) have around 70.000 inhabitants while Södermalm (Hornsgatan) houses around 125.000. In addition, the working population represents respectively 15.000, 22.000, and 12.000 work places. Administratively, the areas are divided into smaller districts, configuring the main streets neighbourhoods that have respectively 30.000, 20.000, and 15.000 inhabitants. Albeit the distinct identities, the area and population characteristics among the streets are rather similar: mainly higher educated and middle to upper class of which around 15% are foreign born (Statistik Stockholm, 2017). Therefore, studying the three streets in a comparative manner may be in interesting for finding similarities or differences

between the areas. Thirdly, the change of the inner city ground floor in relation to the building ownership is interesting since between 1990 and 2014 around half of the rentals apartments have been transformed into condominiums (Statistics Stockholm, 2017). The residents lease apartments with the right of tenant ownership. The tenant-owner's association owns and manages the building through a governing board that decides on the finances and property management.

216 [Figure 1]

## 4. Data from cases

The three inner city main streets present remarkable similarities regarding spatial structures as well as changes in type of business and type of entrepreneurship between 2009 and 2018 that allow for generalizations among the streets. This study examined both "plots" (legal property lines) and "plates" (floorplates within buildings that are demised for leasing). The plots are often measured as not smaller than 200m² while the plates are sometimes as small as 40m², which is a size typical of a small business. Data of the three streets are combined and processed with a statistical tool to produce the following findings. All data presented in this paper have been checked for correlation and have passed the significance test.

## 4.1 Spatial structure

Table 1 presents the streets' spatial structures and plot ownership. The data is retrieved from a property database and collected through measurements based on are approximate map measurement and personal observations.

232 [Table 1]

Table 2 presents the size and scale of the plates. The method used to measure the plate is based on an approximation combining a map measure tool and personal observation.

Furthermore, the plates have been categorized by size: small, medium, large and extra large plates based on the author's judgement. The larger non-commercial institutions have been detected as outliers and have been removed (Missing values: Odengatan 14; Hantverkargatan 15; Hornsgatan 15).

239 [Table 2]

# 4.2 Changes in type of business

Table 3 shows the changes between what business was there in 2009 and in 2018. The open source tool Google Street View has been utilized for observations in 2009 (and if not available then used 2011) complemented with personal observations. Comparing 2009 and 2018, the findings show that almost half of the plates have changed in the past ten years. Also, a few plates have been split and merged, ultimately resulting in slightly lower number and thus larger plates in 2018.

248 [Table 3]

For the categorization of the type of businesses, see table 4.

250 [Table 4]

For the changes of the type of business see table 5.

252 [Table 5]

This study takes an interest in *where* these changes take place and whether the morphological setting can offer an explanation. At street level, the findings tell us that the changes are randomly spread over the street, but that the change is related to plate size: businesses located in small and medium plates have changed more than in large and extra large plates ( $\chi 2$  (1, N = 686) = 8.7, p < ,003). More specifically, the small plates change more radically (i.e. from category 'Retail Product Stores' to 'Personal Beauty Services' as opposed to a change within same category) ( $\chi 2$  (1, N = 686) = 3.9, p < ,046). 'Personal beauty services' are to larger extent situated in small plates ( $\chi 2$  (1, N = 686) = 31.0, p < ,000) while 'Food and Drink services' are to larger extent situated in medium plates ( $\chi 2$  (1, N = 686) = 6.2, p < ,013). 'Retail product stores' show no relation to a specific size of plate.

# 4.2 Changes in entrepreneurship

Through a mix of methods used to triangulate the type of entrepreneurship (Internet searches, personal observations, informal interviews, and online data registers), it has been possible to draw categories. Sole traders, family and local businesses are firms where either the shop owner works in the shop or is personally involved in the daily management. Local companies have been recognized by more than three employees and where the business owner is not

always present in the shop. International and national chains are formulas that are run as branches with recognizable products, branding and marketing. Regional chains are stores with the same brand located in Stockholm county.

All the streets demonstrate a decrease of sole traders, family businesses, and local companies and an increase in chains, particularly regional city chains. Migrants tend to be mostly sole traders, followed by local companies and regional chains owners. See table 6.

277 [Table 6]

The findings show that sole traders, family and local companies are more situated in small and medium plates than in large and extra large plates ( $\chi 2$  (1, N = 686) = 57.8, p < ,000). Also, sole traders are mostly situated in small plates ( $\chi 2$  (1, N = 686) = 104.6, p < ,000). Relating the type of business to the type of entrepreneurship, it can be observed that 'Food and Drink services' are mostly run by local companies ( $\chi 2$  (1, N = 686) = 66.6, p < ,000) and regional chains ( $\chi 2$  (1, N = 686) = 33.7, p < ,000). 'Personal beauty services' are mostly run by sole traders ( $\chi 2$  (1, N = 686) = 44.3, p < ,000).

## 4.3 Radical change in plate size as entrepreneurial opportunities for migrants

To test for how the variables of plate size, type of business and type of entrepreneurship could potentially generate entrepreneurial opportunities for migrants and lower-income populations, each of the business is coded in a range of migrant businesses. Migrant businesses have been identified as an ethnic-themed company run by migrant (e.g. Indian restaurant run by Indian migrant) and neutral company run by migrant (e.g. nail salon run by Vietnamese couple). Online databases featuring company registration information, homepages, as well as personal observations has led to the categorization of migrant businesses.

 The data shows that migrant businesses have increased as more businesses from 2009 that changed have become migrant-driven businesses. Migrant businesses are more situated in small plates ( $\chi 2$  (1, N = 686) = 17.1, p < ,000). Migrants drive mostly 'Food and Drink services' services' ( $\chi 2$  (1, N = 686) = 54.5, p < ,000) and 'Personal beauty services'

 $(\chi 2 (1, N = 686) = 16.6, p < .000)$ . And they are more run by sole traders or family business followed by local companies  $(\chi 2 (1, N = 686) = 62.4, p < .000)$ .

What can be observed from the findings is that there are significant relationships between the variables: plate size, type of business, type of entrepreneurship and whether the business is run by a migrant entrepreneur through measuring the change in time. Since the small plates change often and change most radically, it appears that such spaces are more flexible with regard to any kind of plate activity. This creates entrepreneurial opportunities both for migrants and for lower-income populations seeking to start a small business requiring lower startup capital, which is typical for personal beauty services as well as food and drink services. However, those types of business categories show different tendencies and characteristics while both show similar significant correlations to migrant entrepreneurship. The variance indicates that 'Personal beauty services' are more often sole traders and situated in small plates, while 'food and drink services' are more often regional chains or local companies and situated in medium-size plates. This finding however does not necessarily point toward a standard retail model, but indicates only that the variables are significantly correlated in the case study areas.

# 5. Discussion

Each individual street as a micro-space has its own particular dynamics within its context.

However, intriguingly, this study shows the parallels between all three streets in terms of change of retail and entrepreneurship in relation to morphology. Based on the similarity of the built form of every street, the results could imply that the morphological structures of a street as well as the degree of inner city centrality are determiners for the kind of change happening on a street.

 The fact that around one out of two businesses changed in the past ten years could be an alarming signal for businesses that fail. However, a more holistic interpretation suggests that there is probably a combination of processes at stake. For instance, businesses may simply move to other streets, the owner may retire, a well-running business is bought up and renamed, and so forth. Griffiths (2014) emphasizes the natural evolution of main streets, providing space for negotiating social change as a 'dynamic agent of continuity' (2014, p.39). In fact,

many chains started on main streets before relocating to larger shopping streets (Sangani & Stephans, 2011). Moreover, our findings support the creative and innovative nature of main streets for startups. Historic changes on main streets also took place some twenty years ago, including alterations in physical form, use, economic value and social significance (Dawson, 1988).

Interestingly, the results of this research go hand in hand with national economic development trends, showing decreasing numbers of sole traders and increasing companies and migrant businesses (Tillväxtverket, 2015). It can be observed, then, that main streets are a symbolic and representative urban element that reflects wider social and economic trends.

The results of this study demonstrate the stability of the large and extra-large plates while the small and medium plate sizes generate more dynamism and change that allow for opportunity. At the same time, it is probably not feasible (or even desirable) to have only small and medium plates with small-scale local companies. Rather, a mix of sizes allows for healthy adaptability and vitality of the entire street. Since the size of the plate is a determinant factor for a chain or local company, with a mix of scales it is easier to ensure a right balance between chains and local companies (see Litvin & Rosene, 2017; Litvin & DiForio, 2014).

The presence of small and medium plates has in the past been associated with the presence of sole traders, local firms and family businesses. In contrast, what can be seen now, and not only in Stockholm but also e.g. in London (see Hall, 2011), is the increase of small scale retail chains oriented towards food and drink services, a trend that is parallel to the increase of small, local and independent migrant businesses. The latter are oriented towards not only food and drink services but also personal beauty services, which are both increasingly run by migrants on main streets. Food and drink services target mostly the medium size plates whereas the personal beauty services target the small size plates. The result that can be foreseen is that small, local and independent businesses currently situated in small and medium plates in main streets experience competition from highly adaptable chains that have longer opening hours and subsequently higher turnover, facing the risk that rents will be adjusted to those. Without

effective policies and planning regulations to protect the value of small entrepreneurship on main streets, the city misses the potential for generating entrepreneurial opportunities for migrant and lower-income populations.

The increase of regional chains triggers conflicting values: on the one hand, with the influx of retail chains, all streets are going to look the same, which, according to surveys, is a negative factor for many residents. Distinct character and identity difference between the areas in Stockholm are likely to be erased as these areas are homogenized, in part because of the disappearance of small, local and independent businesses.

On the other hand, the rise of chains might in fact generate opportunities for migrants and lower income populations. The regional chain owners might also be locally-based entrepreneurs who started with one business and managed to expand their small-scale business in another street in the city. Without much effort, since the formula can be exactly the same, these migrant-operated businesses can be meaningfully expanded as local chains. This might be an attractive model in particular for migrant entrepreneurs that are known to want to expand (Tillväxtverket, 2015). Indeed this could be a successful entrepreneurial strategy, as Khosravi (1999) concluded that two businesses can lower the risk of running a single business. In fact, the expansion of an independent migrant business to a city chain may create multiplier effects for workplaces shaped for co-ethnic employees or forms of ethnic vertical integration.

However, the limitations of self-employment for migrants as a way of improving standards of living and reducing social exclusion must also recognized. Migrants engaged in self-employment tend to have lower incomes compared to self-employed indigenous Swedes (Slavnic, 2013).

#### 6. Conclusion

This research has found a correlation between the scale of plates of ground floor spaces on main streets and the evidence of entrepreneurial opportunity and economic productivity by migrant populations. The results indicate a correlation between small and medium size plates

and certain types of businesses (especially food and drink services and personal beauty service) with a correlation between larger sizes and lower levels of entrepreneurship by sole traders, family businesses and local companies often driven by migrants.

At the same time, regional chains are targeting the same plate sizes and types of businesses, sometimes displacing migrant entrepreneurs, but also sometimes providing opportunities for migrants to start their own chains. In this sense, the picture for migrant opportunities in relation to pressure from chain businesses is somewhat mixed. There is certainly a potential impact from chains (both local and otherwise) on the character and neighbourhood identities of the city, which also needs to be assessed.

Generally, older masterplanning and building planning that provided smaller plots and plates also created ample opportunities for migrants. Part of the opportunity undoubtedly comes from the age of the buildings, translating into more affordable space – a point made famously by Jane Jacobs (1961). But as this study shows, varied plot and plate scale is one of the effective policies and planning regulations needed to guide the adaptability of main streets, and to provide continued opportunities for ethnic entrepreneurs to situate themselves on main streets.

This research has highlighted a number of areas that warrant further research. As noted above, there is a question whether the introduction of chain retailing is a net reduction or net expansion of opportunities for migrants. In addition, there is a question of the different effects of plots (legal property boundaries) and the other spaces that are termed "plates" (leased areas within larger buildings and plots). Since plates can be more easily modified over time, it would be instructive to see if there is a difference in the rates in which smaller scale spaces are maintained. Lastly, and perhaps most important, it would be helpful to compare other kinds of streets, particularly streets with greater variations in age and morphology, to either verify or contradict the initial findings here of a correlation between migrant opportunity and smalls plot and plate sizes.

 Finally, this paper concludes that the use of fine-grained and varied plot and plate scales must be part of a wider set of tools and approaches to design places that embrace continuous

evolutionary, change, rather than conceiving of places as untouchable expressions of design creation. To take the latter approach is to fail to recognize the need for all citizens, including low-income and migrant populations, to take their place within the life of the city. **Acknowledgements** The authors would like to acknowledge the Ax:son Johnson Foundation for its financial support of the research project "Migrant Economy in Main Streets" at KTH Royal Institute of Technology, Stockholm, Sweden and as well as the research conducted within the Urban Design Studies Unit at University of Strathclyde, Glasgow, UK. References Barbour G, Romice O, and Porta S (2016) Sustainable Plot-Based Urban Regeneration and Traditional Masterplanning Practice in Glasgow. Open House International 41(4): 15-22. Bolagsverket (na) Statistik om företag och föreningar. See http://bolagsverket.se/be/sok/etjanster/statistik/statistik-1.3538 (accessed 29/05/2018). Carmona M, David M, Scott F, et al. (2015) London's local high streets: The problems, potential and complexities of mixed street corridors. Progress in Planning 100: 1-84. Dawson JA (1988). Futures for the high street. The Geographical Journal 154(1): 1-22. Dibble J, Prelorendjos A, and Romice O, et al. (2017) On the origin of spaces: Morphometric foundations of urban form evolution. Environment and Planning B: Urban Analytics and City Science: 1-24. Favell A and Hansen R (2002) Markets against politics: migration, EU enlargement and the idea of Europe. Journal of Ethnic and Migration Studies 28(4): 581-601.

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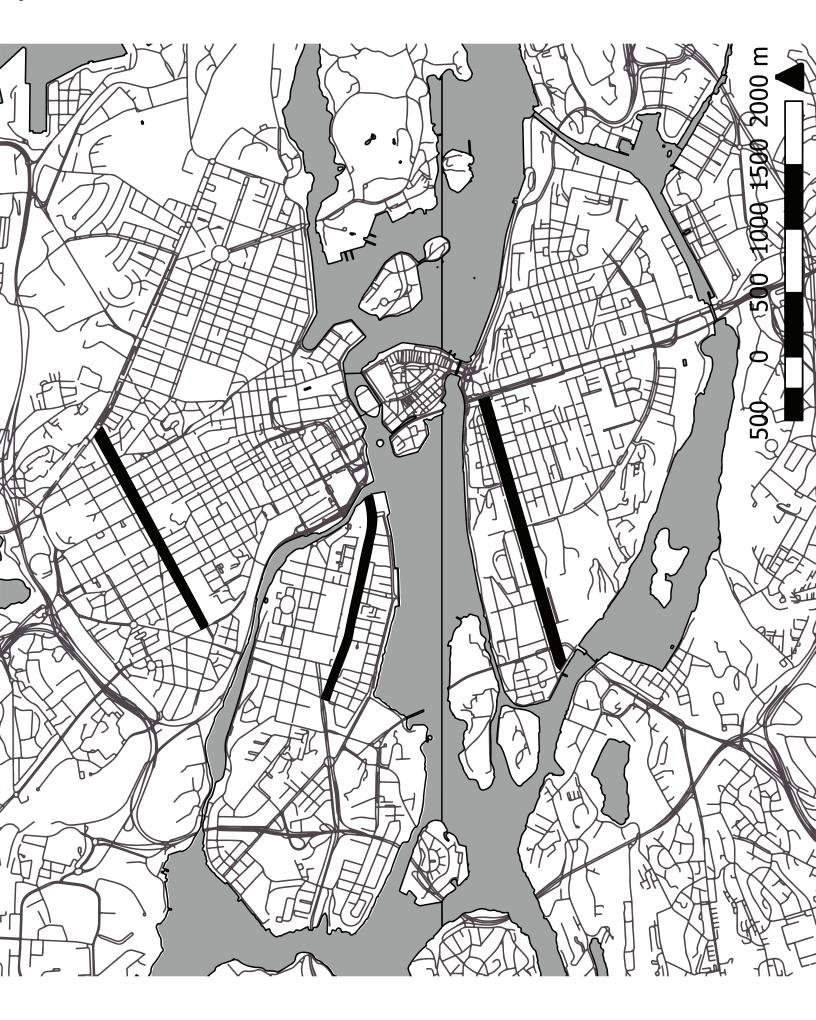
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type of entrepreneurship

596	Figure 1. Map of Stockholm featuring three selected main streets. Top: Odengatan (Norrmalm);
597	middle: Hantverkargatan (Kungsholmen); bottom: Hornsgatan (Södermalm).
598	Table 1. The spatial structure and plot ownership per street
599	Table 2. Sizes and scales of the plates
600	Table 3. Change of plates per street
601	Table 4. Categorization of type of business
602	Table 5. Changes of category of business per street and for all streets
603	Table 6. Change in entrepreneurship per street and for all streets, and the share of migrants per



	Odengatan	Hantverkargatan	Hornsgatan	
Length of the street	h of the street 1750 meters		2300 meters	
Number of blocks	33 blocks	28 blocks	29 blocks	
plots	88 plots	57 plots	112 plots	
Number of doors	Residential 84 Retail and non-retail 209 Other 28 Total 321 door every 5.45 meter		Residential 130 Retail and non-retail 304 Other 69 Total 503 door every 4.57 meter	
Change of plot				
owner 1999 - 2008 2009 - 2018	32% changed 9% changed	33% changed 27% changed	36% changed 12% changed	
Plot ownership 2018 (three largest)	Cooperative 51% Corporate company 17% Insurance company 12%	Cooperative 48% Corporate company 25% Municipal housing company 13%	Cooperative 51% Municipal housing company 20% Corporate company 17%	

Table 1 The spatial structure and plot ownership per street

2018					
	Odengatan	Hantverkargatan	Hornsgatan		
Plate size average Minimum Maximum Median	<b>146 sq.m.</b> 30 sq.m. 1600 sq.m. 131 sq.m.	113 sq.m. 25 sq.m. 420 sq.m. 93 sq.m.	101 sq.m. 12 sq.m. 1307 sq.m. 80 sq. m.		
Distribution of plates:	100%	100%	100%		
"small" plates (up to 60 sq.m.)	24%	23%	42%		
"medium" plates (61 - 120 sq.m.)	36%	39%	37%		
"large" plates (121 - 180 sq.m.)	23%	14%	8%		
"extra large" plates (from 181 sq.m.)	17%	24%	13%		

Table 2 Sizes and scales of the plates.

	Odengatan	Hantverkargatan	Hornsgatan
Number of plates			
2009	229	151	301
2018	226	150	299
% change of plate activity			
between 2009 and 2018	46.1%	48.4%	48.5%

Table 3 Change of plates per street

	Reta	Non-retail	
	Product	Service	
<b>Category</b> Type	Retail product stores Clothes, shoes, fashion; Furniture and home accessories; Retail stores (toy store, office products, music etc.); Florist; Second hand and antique store; Book store	Food and drink services Restaurant-bar; Lunch deli, bakery, ice cream shop and coffee café (fresh products); Fast food (limited seats, take-away service); Hotel; Night club	Culture, education and art Gallery and museum; Theater and cinema; Library; School; Church
<b>Category</b> Type	Food retail product stores Grocery store; Food-oriented shop (limited fresh products); Convenient store; Liquor store; Specialized food store (cheese, butcher, veg & fruit)	Personal beauty services Nail salon, hair dresser and solarium; Tattoo and barber shop; Beauty and massage salon; Gym and dance studio	Offices
<b>Category</b> Type		Commercial services Computer and phone repair service; Optician, electronics, bike, jewelry, photo (product and service combined); Tailor, shoe, lock & key repair and dry cleaning service; Pharmacy; B2B and other commercial services	Residential
Category Type		Business and institutional service Formal service (Bank, money exchange, travel agency, funeral service, property seller etc.); Governmental and municipal service; Doctor and medical support	Vacant

Table 4. Categorization of type of business (source: author)

	Change from 2009 to 2018				
	Odengatan	Hantverkargatan	Hornsgatan	All streets	
Increasing category of businesses	Food and drink services (from 16.5 to 24.3%)  Personal beauty services (from 9.1 to 10.4%)	Food and drink services (from 22.2 to 26.8%)	Food and drink services (from 20.8 to 24.1%)  Personal beauty services (from 10.6 to 13.9%)	Food and drink services +25.0%  Personal beauty services +15.6%	
Decreasing category of businesses	Retail product stores (from 27.4% to 23.0%)	Retail product stores stores (from 18.3 to 15.7%)  Retail product stores (from 31.4% to 23.1%)		Retail product stores - 20.1%	

Table 5 Changes of category of business per street and for all streets

Type of entrepreneurship	Change from 2009 to 2018				2018
	Odengatan	Hantverkargat an	Hornsgatan	All streets	Of which % migrant businesses
Sole traders and family businesses	From 38.7 to 33.0%	From 40.5 to 35.9%	From 33.0 to 31.7%	-9.6%	40.5%
Local companies	From 22.2 to 19.6%	From 28.1 to 24.2%	From 38 to 27.1%	-21.5%	33.5%
Chains (international and national)	From 16.9% to 21.8%	From 12.4 to 15.0%	From 14.2% to 19.8%	+31.7%	9.2%
Regional chains	From 5.7 to 11.7%	From 5.2% to 11.1%	From 7.3 to 12.9%	+93.0%	31.3%

Table 6 Change in entrepreneurship per street and for all streets, and the share of migrants per type of entrepreneurship