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Retail Vacancies in City Centres – Causes and Consequences: Findings from Turku, Finland

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Keywords

City centre, image, retail vacancy, structural vacancy; urban development.

Abstract

This study examines ground-floor retail vacancies in Turku CBD in 2016–2021. It is based on a longitudinal database formed for the study, interviews, discussions with the stakeholders, and documentary analysis. The study found that three fourths of the vacancies were short-term. The long-term vacancies were spaces no longer meeting the requirements of contemporary retailing. In cases where property development was possible, planning disputes may prolong the vacancies for years or even decades.

Introduction

Vacancies are significant economic and societal issues and visible indicators of city-centre vitality and viability. The increased competition from out-of-town and digital retailing and the economic fluctuations have put pressure on city centres and city-centre retailing, with many retailers moving out of town or entirely ceasing their brick-and-mortar activities [1]–[4]. The resulting retail vacancies further decrease the functionality and image of city centres as shopping areas [5], [6]. The COVID-19 pandemic, with its aftermaths, has further strengthened the ongoing development. However, it has also shown the innovative capacity of many city-centre retailers [4], [7].

Retail vacancy rates, measured, e.g., by floor space or empty units, at different markets and market areas are amply provided, published and examined by property management companies and consults. However, in addition to the number of vacancies, their visibility, duration and location within a city centre must be considered to estimate their effects and causes [2], [8]–[10]. The need for more nuanced insight into retail vacancies became evident already in the 1970s and 1980s [11]. In the early 1990s, Reynolds and Schiller [12] argued that in addition to the need for more rigorous academic insights, they were necessary to monitor change, evaluate individual investment decisions, and assist in the formulation of policy guidelines for retail land uses. As Dolega and others [11] state, the radical transformation of traditional retail functions in contemporary urban centres has made the need increasingly compelling. Simultaneously, emerging technologies and new sources of data enable more systematic and better-informed insights into changing urban economic landscapes.

Why do some properties stay vacant for years or manage to attract only short-term tenants, whereas business is flourishing next door? The current study examines ground-floor (spaces having direct access from the street) retail vacancies (also called "store-front vacancy") in Turku CBD, Finland, in 2016–2021. According to our knowledge, no systematic analysis of locations and life cycles of vacant retail spaces in a city centre has been conducted [6], [10]. An obvious explanation for the scant research on high-street vacancy is that the necessary disaggregated data is difficult to obtain [6, *1416*], [11].

The lack of suitable data applies to Finland as well. Therefore, our first concern was to find data to conduct the study. We chose to experiment with data collected by a retail consultancy firm (ALL-in City App [13]) because its accessibility and wide coverage provide the potential for nationwide application if proven usable. Turku centre was chosen as the research site for several reasons. As a regional centre, it has a diversified retail offer and a well-established position as a retail destination. However, it has

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suffered from the retail exodus typical for city centres. As we aimed to assess the performance of the chosen database to monitor the life cycles of retail vacancies, familiarity with the research area made the task easier and enhanced the reliability of the research. Checking the anomalies and verifying the information provided in the database required a lot of fieldwork and tacit knowledge about the study area. One of the advantages of Turku centre was that it was big and diversified enough but still manageable.

After discussing the concept of vacancy as it appears in the current study, we briefly present the study area and the unique features of the Finnish property market that directly impact the research topic. To start our empirical research, we construct a longitudinal database based on the information obtained from ALL-in City App. The database is then used to investigate changes in the study area's retail offer. Next, we identify the spaces that have been vacant during the study period. We continue with an inspection of the spatial distribution of vacancies to detect possible agglomerations. After that, we discuss the reasons for the long-term or frequent vacancies. The quantitative analyses are combined with observations, interviews, and document analysis. Finally, we discuss the implications for the shareholders and the limitations of the study.

I. Retail Vacancy

Applying terms borrowed from unemployment economics, vacancy can be divided into frictional, cyclical and structural vacancy [8]. A frictional vacancy is a short-term phenomenon where the space is temporarily vacant, e.g., due to tenant relocations as leases roll over and expire or renovation. It represents the excess supply needed to allow the market to work efficiently in the short term. Therefore, it is considered the normal vacancy rate in any given market [8, *194*]–[10]. Cyclical vacancy, in turn, reflects the disequilibrium in supply and demand due to a weakening economy or another cyclical shock that affects the entire society [8], [10]. Similar to frictional vacancy, cyclical vacancy is temporary in nature, and some portion (if not all) of the cyclically vacant spaces are likely to find new tenants as soon as the local economy recovers. In addition to economic fluctuations, cyclical vacancies may be caused by adaptation processes and re-balancing within urban retailing systems, as suggested by Dolega and Celińska-Janowicz [14] and adapted by Orr and others [4]. In an attempt to analyse the concept of resilience and its applicability to the retail sector within the context of the town centre, Dolega and Celińska-Janowicz [14] suggest a theoretical framework where the phases of *growth*, *consolidation*, *release*, and *reorientation* follow each other within the adaptive cycle of retailing centres. Especially in the release phase, retail vacancies are likely to increase, whereas innovative entries by new space users may indicate the centre's transfer to the reorientation phase [4].

Defining "long-term" vacancy is not straightforward, and there is no commonly agreed definition of short-term versus long-term vacancy [6]. A long-term vacancy is often used to describe spaces that have been vacant for an extended period, even years. In the studies on city-centre retail vacancy, more than two years [9] or at least three years have been used [15] to define long-term vacancy. In the case of structural vacancy, the space remains unoccupied, as its attributes (e.g., price, location, layout, facilities) no longer meet the needs of the potential tenants and their customers [1], [8], [10]. It refers to space that will remain permanently vacant if not renovated or converted to other uses. As suggested by Rabianski [8, *193*], "*actual vacancy in a property market is excess supply at a given price in that property market*". Thus, the *actual retail vacancy* consists of long-term vacancies not likely to be occupied without major renovations or changes in local market circumstances.

The natural (normal) vacancy has received the most scholarly attention, while structurally vacant commercial stock is relatively unexplored [10]. However, separating different vacancy types is impossible when using disaggregated data. As structural vacancy is long-term by definition, it can only be detected in cross-sectional analyses if the length of vacancy somehow categorises the spaces. Recently, Warnaby and Medway [3] used the Goad Plan Survey available in Britain in their microhistorical study on Kings Street, Manchester, while Dolega and others [11] applied town centre occupancy data made available by Local Data Company in their attempt to depict the structural and functional interdependencies within and between centres. In turn, Orr and others [4] utilised both data sets, completed with data from Experian, in their longitudinal study on adaptive resilience in five UK cities. Common to these three studies is that they apply disaggregated information on retail vacancies that enable nuanced insights into vacancies and their impact on city-centre viability and vitality.

II. Special Features of the City of Turku and the Finnish Property Market

The city of Turku, established in the 13th century, is Finland's former capital and oldest city and the regional centre of Southwest Finland. In the early days, the city underwent many fires, the Great Fire of Turku in 1827 completely destroying the old city centre [16], [17]. The present structure of the Turku CBD reflects the grid plan designed by C. L. Engel at the end of the 19th century that made the Market Square framed by neo-classical stone buildings the central point of the Turku CBD (Fig. 1). In the 1950s–1970s, the city façade transformed substantially



Fig. 1. City of Turku [photo by City of Turku and Suomen Ilmakuva Oy, dashed line (CBD) by the authors].



Fig. 2. The New Market Square in September 2022 [photo by City of Turku, Joel Karlsson].

due to the massive demolition and reconstruction of the buildings dating back to the late 19th century and early 20th century. The demolition of old buildings and especially the corruption related to it, happening not only in Turku, led to the Act on the Protection of the Built Heritage stated in 1964 and amended in 1985 [17].

Nowadays, many of the buildings in the CBD are protected due to their cultural-historical significance, and Turku is notorious for the prolonged planning processes, usually including extensive protection disputes regarding the listed or wanted-to-be-listed buildings. For example, planning for the in-town shopping centre *Hansa* within the commercial block *Hansakortteli*, located next to the Market Square, was started in 1960. After disputes, the shopping centre finally opened in 1986 [16]. Similarly, the reconstruction of the Market Square (with or without an underground parking facility) has been discussed for over thirty years [18]. The town-planning scheme enabling the project was approved in 2012, renovation began in May 2018, and was finalised in November 2022 (Fig. 2).

The conurbation of Turku and the adjacent smaller cities and municipalities form a market area of around 360 000 people within a 50 km radius, almost 200 000 of them living in the city of Turku [19]. The viability of Turku centre as a retail destination has been an issue since the early 1990s when an edge-of-town retail park started to emerge. In October 2001, opening the first out-of-town shopping centre (*Mylly*) in Southwest Finland, located 8 km west of Turku centre, increased the concerns. It was followed in April 2009 by an edge-of-town shopping centre (*Skanssi*) located 4 km east of Turku centre. Recently, Mylly and Skanssi have reported sales and visitor figures exceeding the average market growth. In 2021, Mylly was the eighth-

biggest shopping centre in Finland by sales, leaving Hansa and Skanssi behind [20].

As in many cities, property ownership in Turku centre is fragmented. Although real estate property companies and funds own several commercial buildings, much of the street-level retail in Turku centre is located on the ground floors of housing companies [16]. A housing company is a special form of a limited company where more than 50 % of the building area is designated for residential use. They are founded solely for owning a specific property [21, *17*] and are regulated by the Housing Companies Act and Decree. In addition to flats, the housing buildings in city centres often host commercial spaces designed to serve as shops, offices, cafés and restaurants. Private persons, often the inhabitants, mainly own the shares entitling the control and occupancy of the premises. Rental agreements between individual shareholders and tenants must follow the company's Articles of Association [21].

The company is responsible for managing the property and upkeep of joint facilities, for which it collects a maintenance fee. If the companies take loans, for example, to renovate and modernise the premises, the shareholders are subject to extra charges to pay back the loans [21]. These fees are typically based on the floor area. In most cases, the shares entitled to the control and occupancy of commercial premises are subject to double or even quadruple maintenance fees and finance charges compared to flats. It potentially results in occupancy costs and, consequently, rent levels that are unaffordable for potential space users in many areas. The intended use of the space is pre-specified in the Articles of Association of the company and is challenging to change.

III. Research Design

The database used in the study is built on data collected by a retail consultancy firm (*Salokorpi-yhtiöt Oy*) in cooperation with a nationwide city-centre development organisation (*Elävät Kaupunkikeskustat ry*). The data covering over 40 city centres in Finland has been collected since 2016 in April–May. An online application (ALL-in City App) based on this data covers all ground-floor retail occupancy and shopping centres within the main commercial areas. In practice, a researcher observes the study area, recording all the street-level units and manually inserting them on the map. Thus, the application offers a series of unrelated graphical presentations of the retail locations each year (cross-sectional data) but does not enable longitudinal analyses. In addition to the retail fascia name (as it appears for the observer), the type of use and opening dates (whether serving occasional customers on Saturdays) is noted. The businesses are categorized by their uses (e.g., retail stores, cafes and restaurants, beauty and wellness services, leisure and entertainment

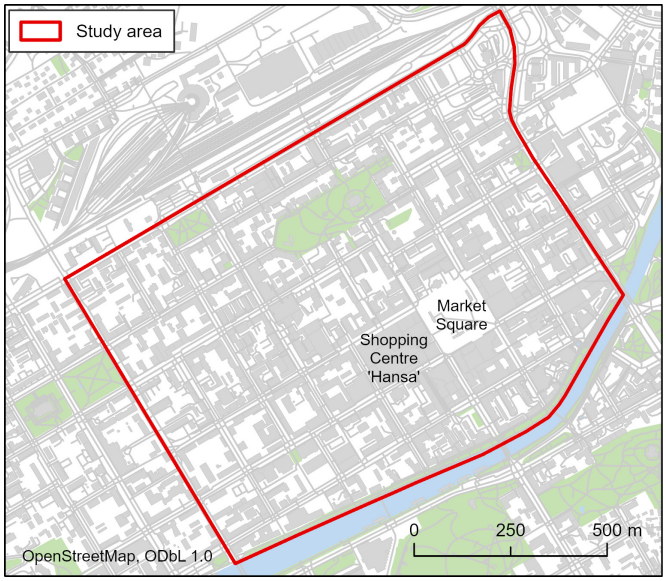


Fig. 3. The study area [map created by the authors].

services), retail stores being further specified by the type of merchandise offered and the breath of assortment (e.g., fashion and accessories, furnishing and home décor, groceries, department store, second hand). The vacant commercial spaces and spaces under reconstruction form a separate category. In principle, ALL-in City App works similarly to the British Goad Plan survey and data provided by Local Data Company, both available in Britain *[3], [11].*

The study area is about 1.1 km^2 (Fig. 3). It is based on our earlier studies [22] and is defined in cooperation with the city-centre development practitioners and retail players in Turku. The commercial block Hansakortteli next to the Market Square, with around 130 retail spaces, including the shopping centre Hansa and other commercial premises, was excluded from the study due to extensive and prolonged renovations during the study period.

To conduct the longitudinal analysis of retail vacancy in the study area in 2016–2021, we constructed a database starting with the data available in ALL-in City App. In the process, the cross sectional-data from different years were combined, and the data was further checked and complemented by extensive fieldwork, including site visits and interviews with the property owners and tenants. On top of that, the research was informed by an extensive document analysis (e.g., Google Street View documents from 2014, newspaper articles, media narratives, www-pages and other available information on the current and past tenants). Similar methods were used by Warnaby and Medway [3] and Orr and others [4]. As Warnaby and Medway state, "*without an interrogation of those responsible for decisions made at the time (even in this relatively contemporary context), few explanatory rationales are available, and we are left to tease out the possible motivations from what might called circumstantial evidence*" *[3, 23].*

The longitudinal database was used to investigate changes in the retail offer and vacancy rates and to inspect the spatial distribution of vacancies to detect possible agglomerations [15]. The study was continued with five semi-structured interviews, including the Urban Development Director of Turku, the former regional director for a major retail company, an experienced real estate/letting agent, the local executive director of the Finnish Real Estate Federation, and a consult specialising in retail planning. As the research continued, local urban planning professionals, retailers, and real estate market participants were contacted to identify the reasons for the vacancies.

IV. Observed Distribution of Space Users and Empty Spaces

In addition to the amount, variety, and quality of the retail offer, other services concentrated at central locations play a significant role when potential customers evaluate their attractiveness [2], [5], [23, *82*]. The occupancy data (Table I) indicates that the composition of retail uses (i.e. retail offer) was relatively stable during the study period. The number of retail spaces in the study area varied between 1056 and 1093. The most frequent space users throughout the study period were beauty and wellness services, cafes and restaurants, and fashion retailers. As the category information was added to the ALL-in City App from 2018 onwards, in 2016–2017 data, only spaces still occupied by the same user in 2018 are categorised. That is reflected in high frequencies of "Category information missing" for 2016 and 2017. Therefore, the number of space users in each category is comparable only within 2018–2021. However, as also this data turned out to be somewhat superficial, including numerous apparent mistakes and missing data, category information in Table 1 should be studied with precaution and considered only indicative.

The vacancy rates varied between 8 % and 13 %. It should be noted that the vacancy rates presented here are based on the number of premises instead of their sizes.

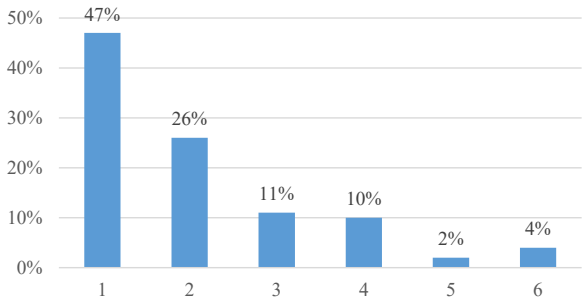


Fig. 4. Vacancies by duration (n = 327) [created by the authors, data source: [13]].

TABLE I
Commercial Spaces by Business Categories in Turku Centre [table created by the authors, data source: [13]]

	2016	2017	2018	2019	2020	2021
Fashion and accessories	71	73	84	85	82	82
Health and beauty goods	22	29	32	30	26	27
Furnishing, home decor and supplies	46	50	63	50	44	43
Leisure	47	53	67	62	56	55
Groceries	40	41	46	42	43	46
Department stores	2	2	5	5	5	5
Other stores	19	21	23	21	19	16
Cafés and restaurants	153	169	188	188	181	188
Beauty and wellness services	168	199	237	239	237	243
Leisure and entertainment services	20	42	42	26	27	25
Commercial services (other)	106	100	122	142	138	133
Services without turnover	19	21	26	25	25	24
Hotels	8	8	10	12	11	11
Offices, etc.	22	28	33	31	32	34
Vacant	103	88	96	122	136	128
Under renovation	2	3	19	10	3	5
Total	848	927	1093	1090	1065	1065
Category information missing	208	139				
All together	1056	1066	1093	1090	1065	1065
Vacancy rate	10 %	8 %	9 %	11 %	13 %	12 %

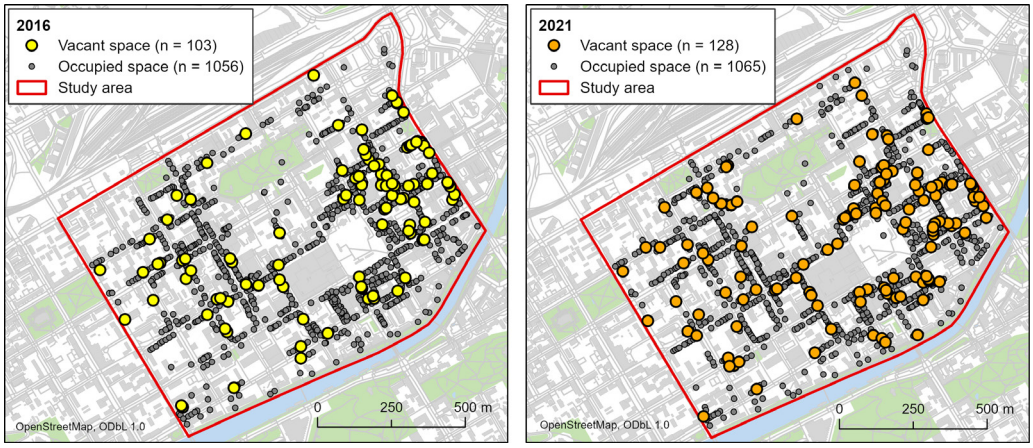


Fig. 5. Commercial spaces within the study area in 2016 and 2021 [maps created by the authors, data source: [13]]. Note that Hansa-block (next to the Market Square) is excluded from the study. The Market Square is an open space with only few small immobile retail spaces.

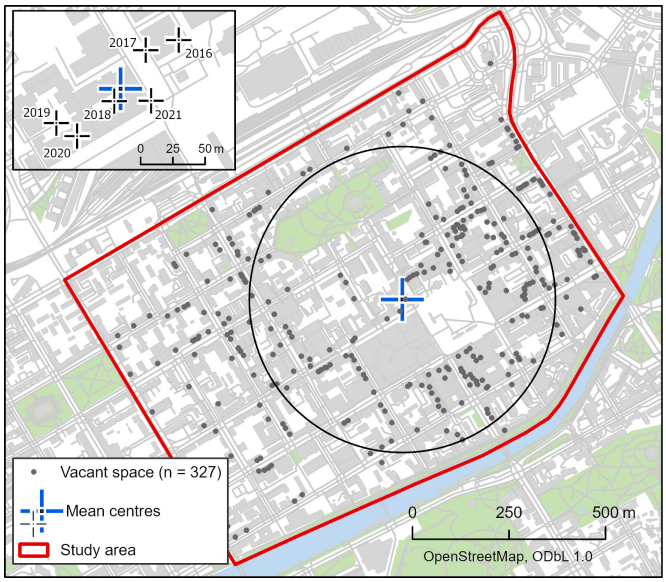


Fig. 6. Spatial distribution of vacancies in 2016–2021 (n = 327; SD = 397 m) and the mean centre. The mean centres for each year are presented in the upper left corner of the figure. [map created by the authors, data source: [13]].

TABLE II

Statistics of Spatial Distribution and Pattern of Vacancy [table created by the authors, data source: [13]]

Year	*n*	*SD* (*r*) in metres	% of spaces within *SD*	*Rn*
2016	103	400	59 %	0.65
2017	88	438	57 %	0.80
2018	96	424	53 %	0.67
2019	122	420	58 %	0.71
2020	136	412	59 %	0.75
2021	128	389	61 %	0.78

Altogether 327 spaces were found vacant at least once at the time of the yearly data collection during the study period. As shown in Fig. 4, 73 % of vacancies were short-term and occasional (one to two years). Figure 5 presents the cross-sectional data from 2016 and 2021, displaying all the retail spaces recorded in ALL-in City App and highlighting the empty spaces. As the figures are based on observations, spaces leased but not in use cannot be separated from the data.

The visual impression of a dispersed distribution of vacancies was further confirmed by statistical analyses (Fig. 6). Standard distance (SD), i.e., the radius that measures the distribution of the spaces around the geographical mean centre, was nearly 400 metres (r, radius of circle). About 60 % of the vacancies fell within the circle. The mean centre was located in the northwest corner of the Market Square. The nearest neighbour ratio (Rn = 0.7) further indicates that the spatial distribution of the vacancies was closer to random distribution (1) than clustered (0). Although the mean centres change yearly, no trend was detected in SDs (Table II). However, the decay in SDs and rise in Rns since 2019 may reflect the massive construction works (including building the underground parking facility "Toriparkki" and rebuilding a hotel) in the vicinity of the Market Square. In addition to other traffic disturbances, public transportation was temporarily moved further away from the Market Square.

V. Long-term Vacancies in Turku CBD

To detect the long-term vacancies, we concentrated on spaces found empty 4–6 times in a row and spaces that had been empty on and off three or more times at the time of data collection [15]. That resulted in 60 spaces to be investigated in more detail. Based on site visits in late 2021, interviews with the property owners/users, and media research, 20 of them turned out to be irrelevant for the current study because, e.g., of inaccuracies in ALL-in City App, the space did not exist anymore, or it was located in a building waiting for demolition. Out of the 40 actual vacancies left, 20 were occupied at the time of the site visits (Fig. 7).

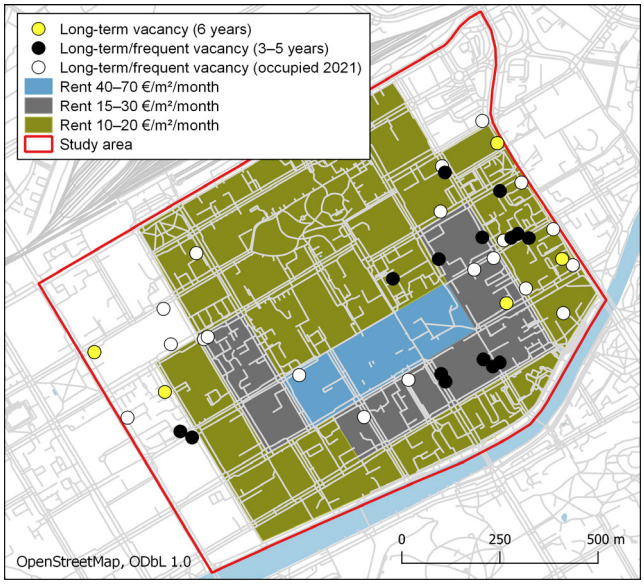


Fig. 7. Long-term and frequent vacancies in the study area and retail rent levels in 2018–2020 [map created by the authors, data sources: vacancies [13], rents [24], [25]].

In some cases, the supposed long-term vacancies were impossible to verify (=whether the space was the same in all data collections) because of the ambiguity of information caused by, e.g., multiple entrances, merged spaces, and unstable coordinates for the spaces (Fig. 8). Small inexpensive spaces are attractive to those starting a new business. As such, they increase the much-needed diversity of the city-centre offering [26], [27]. They may also serve as substitute premises needed for, e.g., because of the renovation of the permanent location. As the premises typically are out-of-use for several months because of the major renovations, many small services like hairdressers move to temporary locations because of the construction works. These substitute locations are important because they enable the service providers to continue their businesses. Sometimes they stay at the new location, and the renovated premises become vacant in turn.

A. Six-year Vacancies

Five of the long-term vacancies were vacant during the entire study period. As Fig. 9 shows, these premises were scattered around the study area, although slightly concentrated on the outskirts of it. However, one of them – a former hairdresser's; neon sign "KAKEJOB" still hanging there in August 2022 – is located only 100 metres from the Market Square in a shopping arcade where major renovations and reorganisation of retail spaces have recently occurred. The arcade is a typical example of the new format of commercial space emerging in Turku in the 1960s [16]. The housing company hosts altogether 25 commercial premises, several of them being on the market in September 2022. The reasons for this vacancy remained unclear, and the space was not publicly advertised.

The housing company *Turun Koulukatu* 19 hosts two commercial premises in addition to a long-term vacancy formerly occupied by Thai massage. The space is not publicly advertised, and the housing company is preparing for plumbing renewal, which expectedly complicates the letting. In turn, the former kitchen store at *Ursininkatu* 14b is currently owned and managed by the housing company, which has decided to renovate the space and find a new use for it. Because of the recent plumbing renewal, the relatively high occupancy costs (double maintenance fees and finance charges compared to flats) complicate the task.

Atriums and one-storey commercial annexes connected to multi-storey housing buildings were typical of the architectural ideals of the 1950s and 1960s [16]. According to ALL-in City App, there has been a vacancy for six years in the inner court (atrium) belonging to the housing company *Eerikinkatu* 5. However, it remains unclear whether the same space has been vacant in all data collections, as some of the premises have been occupied on and off by the ethnic grocery shops located in the same atrium. As Fig. 9 shows, the location appears rather shabby and unkempt. Moreover, the atrium is located next to an office



Fig. 8. Housing companies hosting small retail spaces at *Yliopistonkatu 11 A* and *Yliopistonkatu 33* [photos by the authors].



Fig. 9. Six-year vacancies still empty in late 2021 [map created by the authors, data sources: vacancies [13], rents [24], [25]; photos by the authors: in the top left – *Koulukatu 19*; top middle – *Aninkaistenkatu 14*; top right – *Eerikinkatu 9*, bottom right – *Eerikinkatu 5*; bottom left – *Ursininkatu 14*].

building (hosting three ground-floor retail spaces), being abandoned since 2014 because of indoor air problems. The permission to replace the building with an eight-storey housing building (with retail space on the ground floor) was made in 2017 [28], and the necessary alteration of the plan was started in 2021. However, the preparation of a town land-use plan is still on its way. Because of the recent plumbing renewal at *Eerikinkatu* 5, the occupancy cost is rather high. However, the real estate investor who bought one of the spaces from the property management company Arsenal denied any problems in renting the property when interviewed for the study in August 2022.

All the above-presented premises are relatively small (<60 m^2). However, the space at *Aninkaistenkatu* 14, a former erotic shop and showroom, occupies around 200 m^2 of labyrinthine space partly located in the basement. The space is owned by the former occupant and is for sale. Despite the extensive renovations, the occupancy cost in the company is moderate, and the selling price is negotiable. Nevertheless, according to the real estate agent, there is no interest in the market. The premises were well suited for their former use, but the labyrinthine structure and lack of street parking make it unattractive for alternative uses.

In addition to the premises presented in Fig. 9, one additional six-year vacancy was found. However, it was excluded from the study as a bakery/confectionery opened in the middle of the construction work caused by the building of "Toriparkki" late in 2021 (Fig. 10). The former user of the 80 m^2 space was a fashion store. It can be considered as an example of structural vacancy re-joining the leasable stock of properties.



Fig. 10. A recently established bakery & café in August 2022 in the middle of the construction work [photo by the authors].

B. Four to Five Year Vacancies

Twelve spaces were found vacant for four to five years. As can be seen from Fig. 7, they were somewhat clustered at their micro-locations, as the majority were located in buildings either under major reconstruction, preparing for reconstruction or waiting for a planning decision [15]. Examples of the vacancies are presented in Fig. 11. Rebuilding of the block bordered by *Aurakatu*, *Linnankatu*, *Kauppiaskatu* and *Eerikinkatu*, next to the Market Square, got started after the administrative court rejected the complaints against the plan in 2020 [25]. The space at *Aurakatu* 9 was ready for a new tenant in spring 2022, while *Aurakatu* 5 and *Kauppiaskatu* 4 were still under reconstruction during the site visits (Fig. 11). In September 2022, three spaces at *Aurakatu* 5 were on the market (for



Fig. 11. Examples of four to five-year vacancies [photos by the authors: in the top left – *Aurakatu 9*; top right – *Aurakatu 5*; bottom left – *Kauppiaskatu 4*; bottom right – *Kauppiaskatu 3*].

rent) looking for new tenants [29]. The future of the nearly 200-year-old listed building at *Kauppiaskatu* 3 is under prolonged and heated discussion [30]. New tenants are difficult to find in cases when the future of the property is unclear. However, the space may also be withdrawn from the market to accelerate the planning processes and influence their outcomes. In the literature, this is referred to as a "strategic vacancy" [10]. In the case of *Kauppiaskatu 3*, many of the recent space users were willing to stay, but their tenancies were terminated.

VI. Explanations for the Ongoing Development

In line with the global trend [4], [6], [11], many of the brick-and-mortar stores selling physical goods were replaced with wellness and beauty services or cafés and restaurants. The observed development reflects the increased contribution of non-retail activities, such as cultural venues, leisure activities, and service providers, to the viability of city centres.

Another significant trend is the growing shift of sales to online channels and hybrid models. Consequently, retail locations are no longer viewed only as part of the physical store network but as part of online retail's pick-up and delivery service network. Thus, the retail premises are expected to offer convenient pick-up facilities (including parking spots) for customers and delivery workers [31].

Semi-structured interviews with local urban planning professionals, retailers, and real estate market participants were conducted to explore the reasons for long-term or frequent vacancies. Regarding the extended periods of vacancy, although the spaces were somewhat different, the layout and facilities of the premises (including lack of toilets, sufficient water supply, ventilation, and street parking) were often brought up by letting agents. The retail professionals stressed the unsuitability of many of the premises for the current business models and logistic problems. In many cases, the necessary re-building is either impossible or far too expensive. Therefore, many vacancies are prohibited from being converted to, e.g., hairdressers or cafés.

However, one-third of the long-term or frequent vacancies detected in the study were found occupied during the site visits in late 2021. Although similar signs of recovery have been reported in other cities indicating that the negative shock of the pandemic was more short-term than long-term [7], the finding was somewhat unexpected. Some of the new occupancies were relocations of the existing CBD space users, but also new businesses were started. For example, a housing management office replaced the former pet shop after a two-year vacancy, and a space formerly occupied by a pharmacy had been merged into a hotel, and the former bar and restaurant been vacant and looking for new uses since 2018 will now be converted into a grocery store (*Sale*) opening in spring 2023.

The space may also stay vacant for years because of the planning of major renovations, which in housing buildings are often plumbing or façade renovations. Similar reasons for vacancies are found in the literature [6], [8], [10]. As confirmed by the letting agents, price is seldom the reason for structural vacancies. However, expectedly, price was found as a sensitive topic in the interviews. Because of a variety of reasons, it may be more lucrative to keep the space vacant instead of letting it. Although not directly confirmed, it was admitted that some property owners might refuse to consider rent reductions as they would decrease the property value accordingly. Moreover, there was a fear that nearby tenants would also require their rents to be reviewed. However, after major renovations, in housing buildings, the combination of maintenance and financial fees allocated to commercial premises is likely to surpass the market rents in many areas.

The time-consuming planning processes (typically taking several years) are reflected in vacancies for years before they materialise and become visible to the wider audience. Most four-to-five-year vacancies were in buildings under major renovations in late 2021 or waiting

for a planning decision. Thus, some were examples of strategic vacancies where the spaces were kept vacant to accelerate the processes. Although the number of vacancies reported in ALL-in City App increased in 2021 compared to 2016, the findings may indicate that Turku centre is slowly transferring from the release phase to reorientation [14], [4]. This notion is based on the high share of long-term vacancies considered evolutionary or strategic [10] and the structural changes in the retail offer from physical goods to services.

VII. Summary and Discussion

C. Implications for the Stakeholders

The global economic crisis in the late 2000s and the COVID-19 pandemic have temporarily increased retail vacancy rates in several city centres [3], [7], [9]. Vacancies cause financial losses for the property owners, and they are a societal problem regarding the attractiveness of the city-centre shopping area. However, at a certain level, vacancy is necessary, as it enables new operators to find spaces for their businesses. For example, the rapid rise of second-hand and lifestyle stores in the city centres, even at premium sites, together with ethnic stores [1], [31], has been enabled by the abundance of available spaces.

The pandemic has not treated the different retailing sectors equally [4], [31]. Whereas fashion, shopping-centre-driven speciality retail, restaurants, entertainment and commercial services have experienced severe business challenges, the grocery, interior decoration, hardware, electronics and sporting goods segments have performed well because of the sudden increase in consumer demand.

In the current study, we aimed to explore the spatial distribution and duration of ground-floor vacancies in Turku CBD in 2016–2021 and to identify causes and explanations for the long-term vacancies detected. Surprisingly to some extent, 73 % of the vacancies detected were short-term (1–2 years). Although 88–136 commercial spaces were vacant each year in the study area, only a few were unable to find new uses or users within the study period.

Another unexpected finding was the dispersed location of the vacancies, except for the clusters caused by major renovations or even rebuilding. From the property investor's point of view, renovations and rebuilding are signs of resilience and economic activity. However, for the nearby retailers and their customers, they cause inconvenience, financial losses and other discomforts. The study conducted just before the COVID-19 outbreak in the spring of 2020 found "construction works/roadworks at/around the Market Square" as the most disliked characteristic of Turku centre [22]. The main attractions, in turn, were the riverfront, convenient location and the compact structure of the CBD. One-third of the respondents interviewed in the city centre mentioned "shopping" as the primary purpose for the current trip, followed by work/studies. Thus, like in many other cities, place attractiveness contributes to the pulling power of the city centre, while shopping is the most important attraction [26]. However, ten per-cent came to enjoy the environment and atmosphere with no particular purpose [22].

From the occasional visitor's point of view, all vacancies, irrespective of their duration, are equally harmful to the image of the area [5]. In the case of property development, although the space is in use from the property market perspective, it temporarily decreases the attractiveness of the area. For the neighbouring entrepreneurs, long-term vacancies are harmful, as they potentially decrease footfall for extended periods, even years. In turn, diversity and richness in property use tend to have a positive impact on retail rental values [4], [26]. The impacts on property owners depend on the type of the owner (e.g., a private investor/store owner vs a real estate company with diversified investments) and reasons for the vacancy (e.g., a cyclical vs strategic vacancy). In the current study, many of the long-term vacancies were linked to major renovations or reconstructions of the properties, the processes prolonged by planning disputes. In the case of housing buildings, changes in the Housing Companies Act and Decree would be needed to make the occupancy costs more reasonable when they permanently exceed the market rent. However, when the space layout and facilities no longer meet contemporary retailing requirements, more drastic actions are needed. As conversation into other uses, e.g., a café or a flat, is often profited because of the massive reconstructions required, they pose severe problems to individual owners, housing companies hosting them, neighbouring businesses and finally, to city-centre image and attractiveness.

D. Limits of the Study and Further Research

In this exploratory study, we experimented with the occupancy information provided by a private service provider [13]. Conversion of the cross-sectional data into a structure that enabled longitudinal analyses was time-consuming and required substantial fieldwork, documentary analyses, and tacit knowledge. A closer inspection of the data also revealed several inaccuracies. These are limitations for the nationwide application of the database, although the data is available for over forty city centres in Finland. However, based on discussions with the data provider, we believe the database has the potential to be used as a starting point for investigations on the changing city centre retail landscape, as suggested by Muldoon-Smith and Greenhalgh [10], Dolega and others [11], and Warnaby and Medway [3]. In our future research, we will dig deeper into the explanatory variables for retail

vacancies through more systematic documentary analyses and interviews with property owners.

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