

The effect of the furniture industry towards the layout pattern of business house space in the Jorong Village, Probolinggo

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ARTICLE INFO	ABSTRACT
<p><i>Article history:</i> Received October 16, 2020 Received in revised form Nov. 23, 2020 Accepted November 29, 2020 Available online August 01, 2021</p> <p><i>Keywords:</i> Business houses Furniture industry centers Spatial layout pattern</p> <p>*Corresponding author: Yusfan Adeputera Yusran Department of Architecture, Universitas Brawijaya, Indonesia Email: yusfan@ub.ac.id ORCID: https://orcid.org/0000-0002-2082-9153</p>	<p><i>Jorong Village is as an area designated as the Furniture Industry Center of Probolinggo Regency, thereby leading to changes in some houses functionality from residential to business. This certainly changes the internal and external layout of the houses used for furniture business. The purpose of this research is to identify the spatial layout pattern of business houses in the furniture industrial center area of Probolinggo Regency. This research was carried out with the behavior mapping approach used to describe the existing space in each furniture business house. Therefore, based on the analysis results, there are four patterns of business function space layout, the first, second, and third are located at the front, side and partially inside the building, while the other part is located in the side. Furthermore, the pattern with part of the business function space is located inside the building, and partly outside the front and side of the house. The result showed that three houses had irregular patterns with different layouts from other businesses.</i></p>

Introduction

One of the Indonesian government foundations used to enhance the country's economy is by creating small and medium-sized enterprises (SME) (Lestari 2010). The SME role in helping a country to improve its economy, is by increasing export products. According to Siswaningsih (2016), one of the leading Indonesian products that can be developed to become the main export commodity is wooden furniture. Small and medium industries in Indonesia are mostly home-based businesses (id: Usaha Berbasis Rumah Tangga (UBR)) (Harahap 2018). Similarly, small and medium-sized furniture industries in urban and rural areas use a household-based system.

Business houses also known as home-based enterprises (HBE) are not something new in Indonesia or in other developing countries. This

statement is in line with Kellett and Tipple (2000) research which stated that the use of home property to become HBE is very common. Basically, a house can be interpreted as the living place of an individual or family where daily activities are carried out as a process of self-development (Tutuko 2008). Furthermore, Newmark and Thompson (1977) defined a house as a place for humans (individuals or groups) to take refuge in carrying out their daily activities. Therefore, it can be concluded that the house is a place of residence, shelter and security for an individual or group to carry out their daily life activities. According to Silas (1993), the house functions not only as a place to live, take shelter, or rest, rather, it also acts as a place to raise residents' resources by determining the opportunities that exist to be more productive in opening a business (related to economic activities). Therefore, it can also be used as



productive houses also known as home-based enterprises (HBE). This is also in line with [Adianto and Gabe \(2019\)](#) research which stated that HBE are basically inseparable from economic activities in an environment.

According to [Strassmann \(1986\)](#), home-based businesses in Indonesia have been around for decades with the aim of improving the people economy in urban and rural areas. Presently, this household-based business has become a necessity for communities to support their economy ([Anderson 1982](#)). Many Indonesians carry out non-formal businesses using part of their houses ([Ernadia, Murtini, and Rukayah 2017](#)).

According to [Tipple \(2005\)](#), economic or business functions are activities carried out by house owners, business workers and other people, such as selling or producing goods and services. [Marsoyo and Astuti \(2014\)](#) stated that household-based business is the use of houses for micro-business function spaces, which is run by one family. Therefore, based on the above meanings, it can be concluded that HBE are houses where part of the space is used for valuable economic activities that are jointly carried out jointly by one family. Household-based businesses, also known as HBE consist of two types of spatial functions, namely domestic and economic functions ([Lirenza, Ellisa, and Paramitha 2020](#)). A room with a domestic function is a primary need because it includes several activities and social interactions between home owners and other occupants. In general, a house functions as a domestic place before its transformation. This is different from the economic function space in a business house, which is the space used for producing and selling goods or services as a secondary function. Furthermore, the addition or utilization of space into economic activity or business in a house changes the spatial layout, which tends to later adjust the space requirements for commercial activities ([Puspita and Rahmi 2019](#)).

The phenomenon of changing a house from residential to business is rapidly growing in one of the villages in East Java, named Jorong, Leces Subdistrict, Probolinggo Regency. Most of those living in Jorong develop business functions in the furniture production sector. Its existence in this village was initially triggered by one of the people that started the business, which employed many local people. Over time, employees gained knowledge and experience in producing furniture and opened their own business opportunities in

their houses. This process has continuously increased and sustained the furniture entrepreneurs in Jorong Village till date. This can be proven from the research carried out by [Jamaika, Subagirta, and Viphindrartin \(2014\)](#) at Leces Subdistrict which shows that Jorong Village is the largest furniture entrepreneur in Probolinggo Regency, with a total of 60 entrepreneurs. Therefore, the local government designated the village as the center for the furniture industry.

Some home-based businesses (UBR) changed some of their house functions to furniture business activities by utilizing part of their space or maximizing the remaining house land ([Puspita and Rahmi 2019](#)). This has the ability to change the spatial layout pattern, which varies from one business house to another ([Taufikurrahman, Faqih, and Purnomo 2010](#)). This research examines changes in the spatial layout at business houses caused by the furniture industry activity and determines the factors capable of affecting the spatial layout pattern of the furniture business house in Jorong Village, Probolinggo Regency.

Method

This research was carried out in the Furniture Industry Center of Jorong Village, Probolinggo Regency, which consists of 60 various types of furniture entrepreneurs. Data were purposively selected from 16 furniture entrepreneurs based on criteria related to the type of business, such as those carried out in houses, which is referred to as business houses and the land ownership status as shown in [figure 1](#).



Figure 1. Location of the furniture business house in the furniture industry center at Jorong Village, Probolinggo

This is a qualitative descriptive research, which describes the function and form of a furniture business house layout more accurately and systematically using empirical evidence (Amelia, Antariksa, and Suryasari 2015; Nugroho 2017). This research starts with the data collection stage through field observations and interviews with the owners of each furniture business house. Field observations were carried out using a behavior mapping approach which aims to describe the activities of each user in utilizing the existing spatial functions. Furthermore, interviews with house owners were carried out with the aim of obtaining additional information regarding business houses (Fitria 2018; Ronarizkia and Yusran 2019).

Data and information were also obtained from previous research topics, which were used as support in determining the variables, such as the type, function and layout of the room. These variables are used in the analysis phase to reveal the layout pattern of a business house and the factors that influence the formation.

Result and discussion

Business house as a support to the economy

According to Silas (2000), a house that is partially used for business functions or economic

activities (productive houses) can be divided into three types, namely

1. Separate type, is a house where business functions are more dominant than the primary residence needs. Sometimes, the residence function is placed at the back or front of the house in collaboration with the business space
2. Mixed type, is the function of a house as a residential and business area, although it is more dominant as a residence.
3. Balanced type has a clear separation between the house function as a residence and a business, despite being within the same scope.

Taufikurrahman, Faqih, and Purnomo (2010) carried out a research that discusses types of productive houses in residential spatial patterns due to household-based industrial activities using metal craftsman houses in Ngingas Village, Waru, Sidoarjo Regency. This research showed that there are four types of productive houses based on spatial layout, as follows:

1. House with space for business and residential (household) functions.
2. House with a separate business space from outside the yard, which is still included in the territory of the house site.
3. House with business function space located in the front, side and back.
4. House with a business function space and a territorial barrier separating it from the residence area (household).

Based on the explanation above, these types of houses are used as the basis for identifying the location of the economic or business function room in Jorong Village. This aims to determine the layout pattern of each business house as well as the factors that influence the formation of these spatial layout patterns.

Function and type of furniture business house







Based on the survey results, the furniture business houses in Jorong village, Probolinggo Regency, are divided into two types, namely complex and craftsman. A house business complex is a mixed-use household with a production area (workplace) and a marketing (showroom). A craftsman's house is a mixture of household functions with a workplace.







1. Complex business house



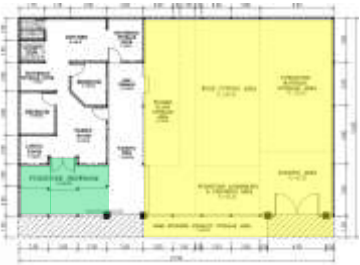

A complex furniture entrepreneur carries out various stages of production, which starts from the initial to the final stage, namely marketing. This means that this type of furniture business has a more complete space than marketing

(showroom) or production (workplace). There are eight complex business houses in the furniture industry center at Jorong Village, Probolinggo Regency, as follows (table 1):

Table 1. Classification of complex furniture business houses in the furniture industry center of Probolinggo Regency

Floor plan	Business house condition	Description
 <p data-bbox="370 779 532 804">Mr. Hadi house (R2)</p>		<p data-bbox="922 386 1320 436">The economic function areas are located at the front and side of the domestic function room.</p> <ul data-bbox="922 436 1320 541" style="list-style-type: none"> - The front side is a furniture showroom area which is located together with the domestic section of the in on building - The side is the furniture production area
 <p data-bbox="362 1220 548 1245">Mr. Kusbari house (R7)</p>		<p data-bbox="922 827 1320 877">Economic areas are located at the front, back and side of the domestic function</p> <ul data-bbox="922 877 1320 1077" style="list-style-type: none"> - The front part is used as a storage space for furniture products, which are integrated into the main building - The back is a space for the furniture production area to assemble and store frames - The side of the house consists of a furniture production area, such as finishing, storage space and showroom
 <p data-bbox="370 1543 532 1568">Mr. Sakur house (R8)</p>		<p data-bbox="922 1268 1320 1318">Economic function areas are located at the front and side of the main house.</p> <ul data-bbox="922 1318 1320 1392" style="list-style-type: none"> - The front is used as a furniture showroom and it is separated by doors and building walls - The side is the furniture production area

Floor plan	Business house condition	Description
 <p data-bbox="423 562 634 590">Mr. Sholehusin house (R9)</p>		<p data-bbox="998 268 1365 317">Economic function areas are located at the front and side of the main house.</p> <ul data-bbox="998 317 1385 415" style="list-style-type: none"> - The front is a furniture showroom separated by the door and the building wall - The side is a production storage room, assembly and finishing areas
 <p data-bbox="430 961 625 989">Mr. Mustofa house (R10)</p>		<p data-bbox="998 611 1365 659">Economic function areas are located at the front and side of the main house.</p> <ul data-bbox="998 659 1385 785" style="list-style-type: none"> - The front is the furniture showroom area, separated by the door and the building wall - The side part consists of the furniture production area, the finishing, assembly, frame and storage areas.
 <p data-bbox="430 1514 625 1541">Mr. Sukarip house (R14)</p>		<p data-bbox="998 1010 1385 1115">It consists of two floors, the domestic function area at the back of the second floor of the house, while the economy function area is on the first floor at the front and side of the main house.</p> <ul data-bbox="998 1115 1385 1241" style="list-style-type: none"> - The front is the furniture showroom area, located within the same building - The side part is a furniture production area which consists of an assembly room and a storage room for furniture frames

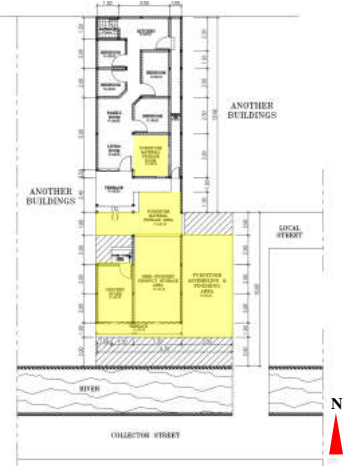

Floor plan	Business house condition	Description
 <p data-bbox="357 577 544 604">Mr. Syafi'i house (R15)</p>		<p data-bbox="925 268 1291 315">Economic function areas are located at the front and side of the main house.</p> <ul data-bbox="925 319 1307 462" style="list-style-type: none"> - The front and west side is a furniture showroom area - The east side is the furniture production area (assembly, finishing and frame storage), while the west side is part of the furniture showroom space accompanied by a warehouse.
 <p data-bbox="349 924 552 951">Mr. Suyanto house (R16)</p>		<p data-bbox="925 632 1291 678">Economic function areas are located at the front and side of the main house.</p> <ul data-bbox="925 682 1307 825" style="list-style-type: none"> - The front is a furniture showroom - The side is a furniture production area consisting of a storage room for raw materials, a wood scraps, a wood cutting room, an assembly and finishing room as well as a furniture logistics area

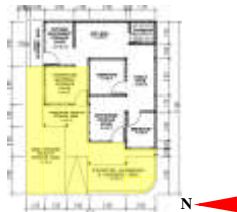







2. Craftsman business house

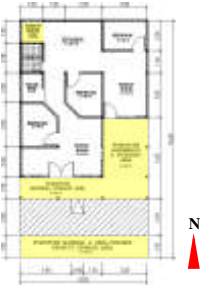





A craftsman is a furniture entrepreneur that only carries out the production process at the workplace. The space in the production room is for storing materials, frames, assembling

furnitures, and finishing areas. [Table 2](#) provides a detailed a total of eight craftsman in the furniture industry center in Jorong Village, Probolinggo Regency.

Table 2. Classification of craftsmen furniture business house in the furniture industry center at Probolinggo Regency

Floor plan	Business house condition	Description
 <p data-bbox="365 1753 527 1780">Mr. Jupri house (R1)</p>		<p data-bbox="925 1268 1307 1333">The economic function area in the form of furniture production space is located at the front, as well as inside and outside the main house</p> <ul data-bbox="925 1337 1307 1480" style="list-style-type: none"> - The front part of the main house is used for storage space of furniture production materials - The outside of the main house is used for assembling and finishing rooms, as well as the furniture production warehouse located in a building different from the main house.

Floor plan	Business house condition	Description
 <p data-bbox="430 504 617 525">Mrs. Sarila house (R3)</p>		<p data-bbox="998 273 1380 336">The economic function area in the form of furniture production space is located inside and outside the main house</p> <ul data-bbox="998 346 1380 483" style="list-style-type: none"> - The business function in the house is the storage room for furniture production materials. - The business function on the front side is for assembling and finishing furniture, then on the side, it is used as storage space for storing products and frames.
 <p data-bbox="438 892 609 913">Mr. Sarika house (R4)</p>		<p data-bbox="998 556 1380 693">The economic function area in the form of a furniture production room is located at the front of the north side which is in the same site as the house. This furniture production room is used to assemble furniture as well as store tools and materials</p>
 <p data-bbox="438 1333 609 1354">Mr. Imam house (R5)</p>		<p data-bbox="998 945 1380 1039">The economic function area in the form of a furniture production room located at the front and side of the main house, as well as inside and outside the building</p> <ul data-bbox="998 1050 1380 1312" style="list-style-type: none"> - There are two furniture production rooms located inside the house, namely a kapok filling room and a sewing room, adjacent the domestic function and also used as a storage area for furniture products - The front of the house is used for the furniture production area in general (sofas and wood materials), while the side production room is used for the assembly and finishing area for wooden furniture, storage space for frames as well as wood pieces.
 <p data-bbox="414 1711 641 1732">Mr. Abdul Wahid house (R6)</p>		<p data-bbox="1015 1386 1380 1512">The economic function area in the form of a furniture production room is located at the front of the main building and used as a production room as well as storage of furniture frames and materials. It is located on the front porch</p>

Floor plan	Business house condition	Description
 <p data-bbox="321 577 581 604">Mr. Abdul Kholik house (R11)</p>		<p data-bbox="922 268 1299 340">The economic function area in the form of furniture production space is located at the front and back of the house</p> <ul data-bbox="922 340 1307 583" style="list-style-type: none"> - The economic function in the house is located at the back, in the form of a storage room for production materials which is directly adjacent the kitchen - The economic function located at the front is a storage space for frames as well as an assembly and finishing room for furniture. - The exterior, which is located separately from the building, contains space for storing materials and frames
 <p data-bbox="328 892 581 919">Mr. Abdul Rauf house (R12)</p>		<p data-bbox="922 634 1307 705">The economic function area in the form of a furniture production room is located at the front of the main house as a finishing room, while others located at the front consist of an assembly area and a storage room for wooden pieces.</p>
 <p data-bbox="344 1228 565 1255">Mr. Makrusi house (R13)</p>		<ul data-bbox="922 955 1307 1102" style="list-style-type: none"> - The economic function area in the form of a furniture production room is located at the front side of the main house - The side is used to store furniture materials - The front is used to store furniture frames as well as for assembling and finishing furniture

The layout of the furniture business room

Jorong Village, which was originally a residential area recently become a furniture industry center with changes in the inner layout of the business house. The changes and layout of the furniture business function room have been previously described in Jorong Village, Probolinggo Regency, in four types, namely:

1. The pattern of business function room, are partially inside, and beside the house (figure 2).

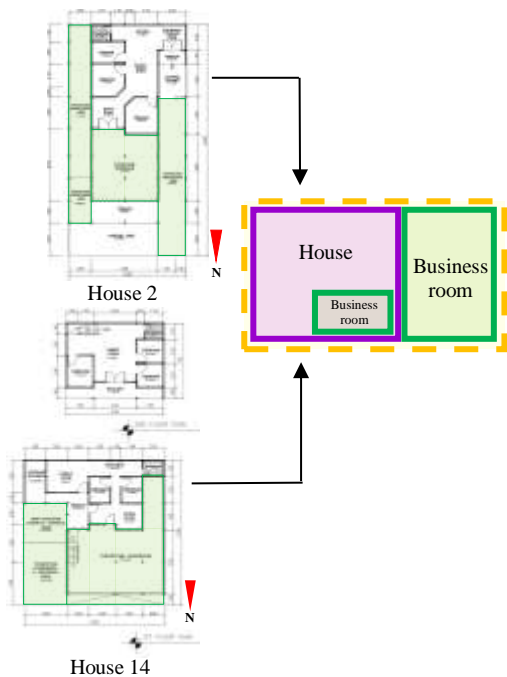


Figure 2. Classification of business houses pattern 1

The business houses in this pattern are entirely complex, consisting of the Mr. Hadi (R2) and Mr. Syafi'i (R14) houses. The economic or business function room placed on the side of the two houses is used as a furniture production room for assembling, finishing as well as storing the framework and materials. This is because the area for furniture production needs additional space that is wider and semi-open to fulfill several production processes that require sunlight and air for the drying process. Furthermore, the initial design of the two houses were on the left side of the land, therefore the furniture production room was placed in the side of the house.

In contrast to the economic or business function room on the inside of the building, these two houses function as a furniture showroom located at the front and visible direct from the road. These two business houses use the inner building for a furniture showroom because the products on display require protection and security from several things such as the weather in order to maintain its quality. Furthermore, the front position of the building is close to the road, therefore this furniture showroom is visible and reachable for visitors.

2. Business function space pattern, are partially inside buildings, and also located in front of and beside the house (figure 3).

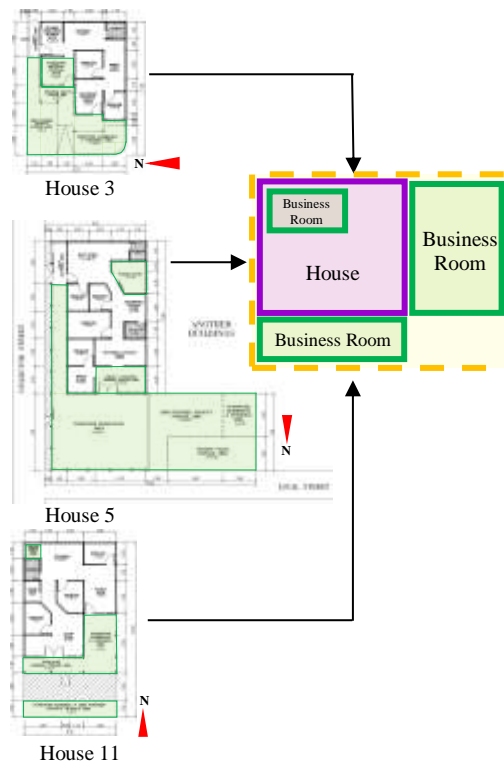


Figure 3. Classification of business houses pattern 2

The business house in this pattern is a type of craftsman furniture, which consists of houses belonging to Mrs. Sarila (R3), Mr. Imam (R5) and Mr. Abdul Kholik (R11). The business or economic function room placed on the side and front of the three houses is used as a furniture production room for assembling, finishing and storing the framework and materials. This is because the initial design of the three houses was at the left land on the sides and front of the house, therefore the furniture production room was located in that area. The business function room located at the front of the house certainly has an advantage in terms of marketing strategy because it is close to the road and can be seen more easily by visitors.

The location of the economic function room in the three houses is for storing materials and furniture production tools, except for Mr. Imam's house (R5) where it is used to store furniture production items, a sewing room and filling springbed cotton. Therefore, Mr. Imam's business house is the only furniture place that produces beds and springbeds. The location of this kapok filling room requires a closed space to maximize the filling process. Similarly, the storage room for furniture production is placed on the inside

because there are certain materials such as sofa foam that need protection from outside conditions such as during rainfall.

3. The business function room pattern at the front of the house (figure 4).

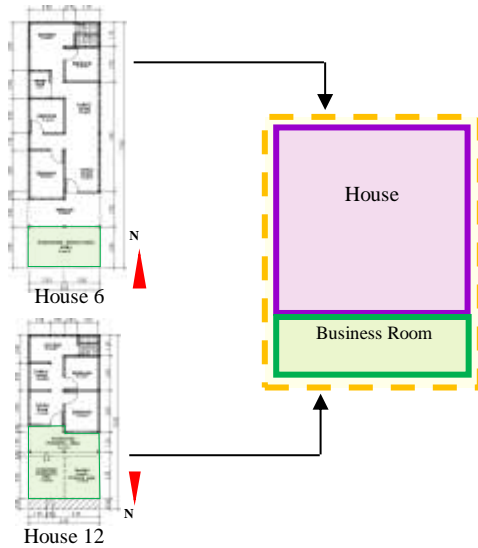


Figure 4. Classification of business houses pattern 3

The business houses included in this pattern are those of Mr. Abdul Wahid (R6) and Mr. Abdul Rauf (R12). The front space of the two houses are used as a room for assembling and finishing furniture as well as a space for storing materials and frames. This is because areas for assembling and finishing furniture need to be semi-open and exposed to sunlight or air for the drying process. The production room is also at the front because in the initial design the two houses only left the land in front of the house as a building border, therefore it is fully utilized for assembling, finishing and storing material as well as the front frame area which is the building boundary.

The production area is located close to the road, thereby making it easier for visitors to see, and providing an economic advantage. However, there are drawbacks in terms of accessibility which certainly interfere with guest or occupant access to the house.

4. The business function space pattern located at the front and side of the house (figure 5).

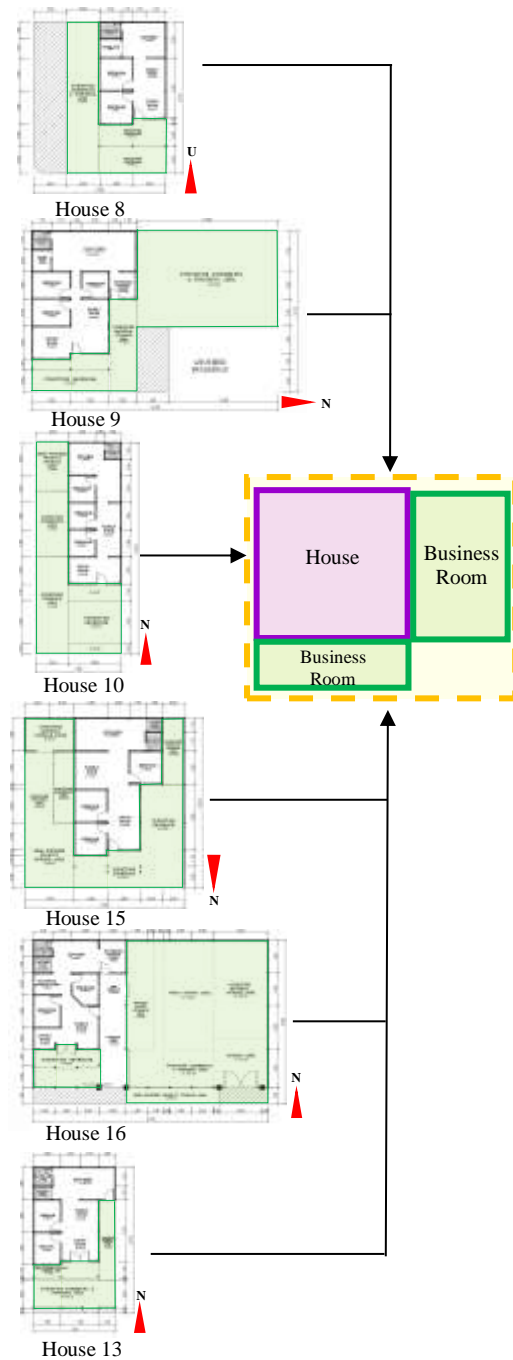


Figure 5. Classification of business houses pattern 4

Most of the business houses in this pattern are complex furniture with only one craftsman. The complex furniture business houses included in this pattern, are those of Mr. Sakur (R8), Mr. Sholehusin (R9), Mr. Mustofa (10), Mr. Syafi'i (R15) and Mr. Suyanto (R16). The fourth spatial

layout pattern is Mr. Makrusi's (R13) business house.

It consists of a business function located at the front and side. The front part is used as a furniture showroom function, which is a space to exhibit furniture products, therefore this area requires a space that is easily visible or accessible to visitors. The front area, adjacent to the road, has been chosen by many complex furniture business houses to place their furniture showrooms. Furthermore, the side area function as a furniture production area because the remaining land in the initial design, is close to the road. All types of complex business houses included in this pattern utilize the side area of the house from the back to the front which is directly adjacent to the road, therefore this production room can also be easily seen by visitors.

The houses pattern close to the road, especially the front, is certainly a strategic place in placing economic or business function spaces. Ronarizkia and Yusran (2019) while carrying out a research on a business house in Kampung Tridi Jodipan Malang, stated that all those in Tridi Village use the front area which originally functioned as a terrace for economic or businesses because it is directly adjacent to the main road of the tourist center, therefore easily visible and attract visitors to buy merchandise.

Finally, it was found that three houses had an irregular pattern due to their varying layouts, namely Mr. Jupri (R1), Mr. Sarika (R4) and Mr. Kusbari (R7).

Mr. Jupri's house is a type of craft with function rooms located on the inside and at the front. The front is used as a furniture assembly and finishing room, as well as a shop and furniture production warehouse. This is because the area for assembling and finishing furniture require a wider and semi-open area. Furthermore, the initial design of the two houses left some land in front of the house, which was used as the furniture production area. The business function space on the inside is a material storage space because it requires additional storage space for materials, such as sofa foam, which require protection from outside conditions (rainfall).

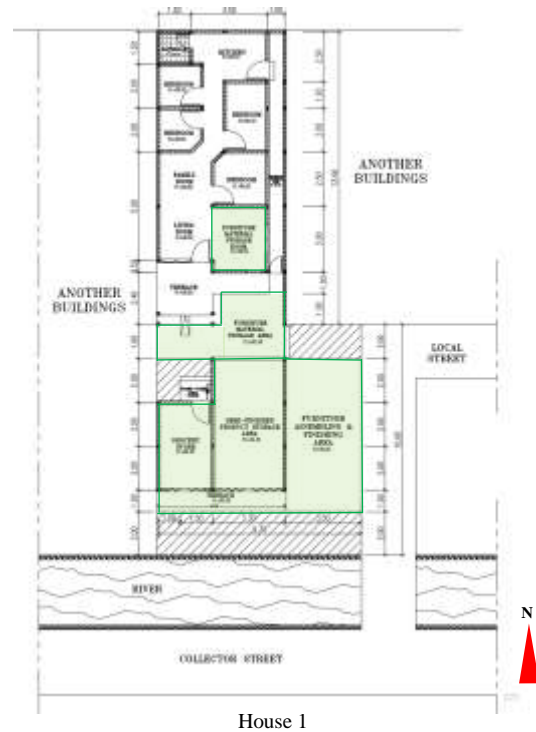


Figure 6. The layout pattern of Mr Jupri's house

Another furniture business house with a different pattern from others is owned by Mr. Sarika (R4) with the function room located next to the house. This business house is a type of craftsman, with an economic function room located beside the building and used for assembling, finishing and storing furniture materials and frameworks. This is because in the initial design of the house only the left land beside owned by Mr. Sarika was limited.

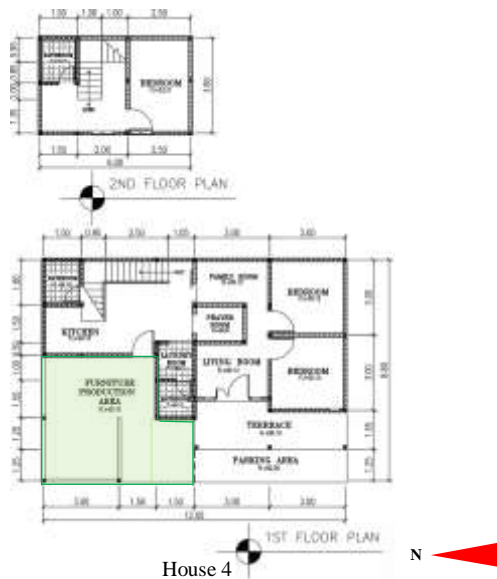


Figure 7. The layout pattern of Mr Sarika's house

Mr. Kusbari's (R7) house also has a different room layout pattern from others. This type of complex furniture business house has economic function rooms at the front, side and back. Furthermore, several business function rooms were also located on the inside of the main house. The back is fully used for furniture production, which consists of an assembly and a storage room. The front is used to place or store furniture products. Meanwhile, the side is used as the finishing room, material storage space and the furniture showroom. The furniture showroom is located next to Mr. Kusbari's house, which is close to the main road. Therefore, Mr. Kusbari prefers to build a different mass with the orientation facing the main road hence it is easier for visitors to visualize. The furniture business spatial layout in this business house is the main house surrounded by a business space, because the initial design consists of empty land on the front, side and back, therefore the main house is in the middle.

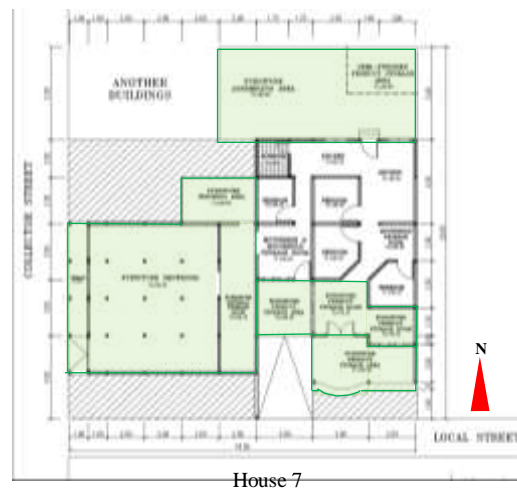


Figure 8. The layout pattern of Mr. Kusbari's business house

Factors that shape the layout pattern of the furniture business space

Based on the previous explanation regarding the layout pattern of the furniture business space, economic factors were found to shape the pattern in each house. This can be seen from the location of all furniture showrooms in the complex business house type of Jorong Village, which is placed in front of the house. Therefore, it is directly adjacent to the main road in the Furniture Industry Center area of Probolinggo Regency. This area is widely used for business activities considered as the most strategic place to showcase furniture products, therefore, it is seen by visitors as potential buyers of furniture products.

This is also due to the ownership factor used in the production of equipment and land available in the initial design of each business house. The factor of equipment ownership can be viewed from the more complete equipment owned, the greater amount of land used for furniture production. A large production area requires a significant space and need to be placed on the outside. This is the same with Mr. Suyanto's (R14) business house, which has a wood cutting tool and a storage room for raw materials in the form of logs, therefore the furniture production area is quite large and is placed on the outside of the building, even though it is still within the territory of Mr. Suyanto's house. This statement is similar to the research carried out by [Taufikurrahman, Faqih, and Purnomo \(2010\)](#) regarding changes in house space layout patterns due to metal industry activities in Ngingas Sidoarjo Village. The

crosstab method that affect the spatial arrangement pattern formed in each business house are workers as space users, equipment ownership, house status, and income, while factors that do not affect changes are family structure, education, house design and age.

Furthermore, the land ownership factor of each previous house is influential. Business functions tend to be formed on previously remaining land because it functions as a secondary space, with its location adjusted to the the primary space of the previous domestic function.

Conclusion

The spatial layout pattern in the Furniture Industry Center of Probolinggo Regency consists of four patterns. Firstly, the type of business function space, located inside and outside the site territory. Secondly, the house with a business function space is on the front, side or back, and still directly adjacent to the house building. Thirdly, the types of business space, which are partly located in buildings, and on the front, side or back of the house. The pattern with the business function space is located at the front, side, as well as partially inside the building, while others are on the side, and then located inside buildings and partially located outside the front and side of the house.

Based on these four patterns, it is found that the most dominant pattern used in business houses in Jorong Village, Probolinggo Regency is the fourth where the business function space is located at the front and side of the house. Most of the economic function rooms are located in an area directly adjacent to the main road of the Probolinggo Regency Furniture industry center area, which is the front of the house. Therefore, it is easier for visitors to see, and ease to market the furniture products. Furthermore, most house owners only use the remaining existing land without buying additional land because the facilities or equipment owned by majority of the furniture business houses in this village are also minimal. These two things illustrate that economic factors and ownership of production equipment as well as land ownership are factors that influence the shape of the business houses layout pattern in the Furniture Industry Center, Jorong Village, Probolinggo Regency.

References

- Adianto, Joko, and Rossa Turpuk Gabe. 2019. 'The Spatial Strategies and Its Mechanism of Home-Based Enterprise in Kampong Cikini, Jakarta'. *A/Z: ITU Journal of Faculty of Architecture* 16 (2): 55–68. <https://doi.org/10.5505/itujfa.2019.65668>.
- Amelia, Rizky, Antariksa, and Noviani Suryasari. 2015. 'Tata Letak Ruang Hunian-Usaha Pada Rumah Lama Milik Pengusaha Batik Kalangbret Tulungagung'. *Jurnal Mahasiswa Jurusan Arsitektur* 3 (2). <http://arsitektur.studentjournal.ub.ac.id/index.php/jma/article/view/110/107>.
- Anderson, Dennis. 1982. 'Small Industry in Developing Countries: A Discussion of Issues'. *World Development* 10 (11): 913–48. [https://doi.org/10.1016/0305-750X\(82\)90034-1](https://doi.org/10.1016/0305-750X(82)90034-1).
- Ernadia, Loretta, Titin Woro Murtini, and R. Siti Rukayah. 2017. 'Perubahan Lingkungan Dan Tata Ruang Rumah Tinggal Di Desa Wisata Kandri'. *Tesa Arsitektur* 15 (1): 41–53. <http://journal.unika.ac.id/index.php/tesa/article/view/1006>.
- Fitria, Tika Ainunnisa. 2018. 'Pengaruh Seting Ruang Terhadap Perilaku Pengguna Dengan Pendekatan Behavioral Mapping'. *Jurnal Arsitektur Dan Perencanaan (JUARA)* 1 (2): 183–206. <https://ejournal.unisayogya.ac.id/ejournal/index.php/JUARA/article/view/775/pdf>.
- Harahap, Azwar. 2018. 'Analysis Of Micro And Small Industry Development In Indonesia'. *International Journal Of Scientific & Technology Research* 7 (4). <https://www.ijstr.org/final-print/apr2018/Analysis-Of-Micro-And-Small-Industry-Development-In-Indonesia.pdf>.
- Jamaika, Putri, I Wayan Subagirta, and Sebastiana Viphindartin. 2014. 'Analisis Faktor Yang Mempengaruhi Pendapatan Pengusaha Mebel Di Kecamatan Leces Kabupaten Probolinggo'. *Artikel Ilmiah Mahasiswa*, 1–6. [http://repository.unej.ac.id/bitstream/handle/123456789/64386/Putri](http://repository.unej.ac.id/bitstream/handle/123456789/64386/Putri%20Jamaika.pdf?sequence=1&isAllowed=y)
- Kellett, Peter, and A Graham Tipple. 2000. 'The Home as Workplace: A Study of Income-Generating Activities within the Domestic

- Setting'. *Environment and Urbanization* 12 (1): 203–14.
<https://doi.org/10.1177/095624780001200115>.
- Lestari, Ety Puji. 2010. 'Penguatan Ekonomi Industri Kecil Dan Menengah Melalui Platform Klaster Industri'. *Jurnal Organisasi Dan Manajemen* 6 (2): 146–57.
<https://jurnal.ut.ac.id/index.php/jom/article/view/289>.
- Lirensa, F, E Ellisa, and A Paramitha. 2020. 'Spatial Negotiations in Domestic Space of the Home-Based Garment Industry in Kampung Tambora, Jakarta'. *IOP Conference Series: Earth and Environmental Science* 447 (March): 012032.
<https://doi.org/10.1088/1755-1315/447/1/012032>.
- Marsoyo, Agam, and Wahyu Kusuma Astuti. 2014. 'The Prospect of Poor Home-Based Enterprises in Yogyakarta'. In *Space for the Next Generation*. 2nd ICIAP.
<https://silo.tips/download/the-prospect-of-poor-home-based-enterprises-in-yogyakarta>.
- Newmark, Norma L., and Patricia J. Thompson. 1977. *Self, Space, and Shelter: An Introduction to Housing*. New York: Harper and Row Publizer Inc.
- Nugroho, Rahadian. 2017. 'Pengaruh Kearifan Budaya Lokal Terhadap Hunian Masyarakat Pengrajin Tempe Di Kampung Sanan Malang'. *Local Wisdom: Jurnal Ilmiah Kajian Kearifan Lokal* 9 (2).
<https://doi.org/10.26905/lw.v9i2.1978>.
- Puspita, Luluk Rani, and Dwita Hadi Rahmi. 2019. 'Horizontal Spatial Transformation of Home-Based Enterprises in Kampung Karangasem, Depok, Sleman'. *Journal of Architectural Research and Design Studies* 2 (2).
<https://doi.org/10.20885/jars.vol2.iss2.art7>.
- Ronarizkia, Adita, and Yusfan Adeputera Yusran. 2019. 'Utilization Pattern Of Residential Terrace as a Trading'. *DIMENSI (Journal of Architecture and Built Environment)* 46 (1): 51–58.
<https://doi.org/10.9744/dimensi.46.1.51-58>.
- Silas, Johan. 1993. *Housing Beyond Home; Case Study of Surabaya*. Surabaya: ITS.
- . 2000. 'Rumah Produktif Pendekatan Tradisi Dan Masyarakat'. Surabaya.
- Siswaningsih, Dwi. 2016. 'Kinerja Ekspor Indonesia 2016'. *Warta Ekspor*, December 2016.
http://djpen.kemendag.go.id/app_frontend/admin/docs/publication/8331514958117.pdf.
- Strassmann, W. Paul. 1986. 'Types of Neighbourhood and Home-Based Enterprises: Evidence from Lima, Peru'. *Urban Studies* 23 (6): 485–500.
<https://doi.org/10.1080/00420988620080781>.
- Taufikurrahman, Muhammad Faqih, and Hari Purnomo. 2010. 'Perubahan Pola Tataan Ruang Rumah Tinggal Sebagai Akibat Kegiatan Industri Rumah Tangga'. In *Perumahan Permukiman Dalam Pembangunan Kota*. Surabaya: ITS.
<https://pdfslide.tips/documents/perubahan-pola-tataan-ruang-rumah-tinggal-sebagai-akibat-secara-fisik-dan-non.html>.
- Tipple, Graham. 2005. 'The Place of Home-Based Enterprises in the Informal Sector: Evidence from Cochabamba, New Delhi, Surabaya and Pretoria'. *Urban Studies* 42 (4): 611–32.
<https://doi.org/10.1080/00420980500060178>.
- Tutuko, Pindo. 2008. *Permukiman Rumah Produktif Dan Perkembangannya*. Malang: GKAK Arsitektur Universitas Merdeka Malang.

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