Effects and Learnings of Housing Support in Hungary, 2015-2017

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Abstract. Construction industry in Hungary was heavily affected by the economic crisis starting in 2008. Although there was a slight increase due to infrastructural investments as of 2012, residential construction reached a critical level in 2013. In 2015 a new housing support policy was introduced in Hungary. Main target of the regulation is to help families to implement their new home. On the other hand, government wanted to create demand on the residential market to revitalize the industry. Since then every year changes happened to the enactment which were supposed to facilitate admittance of families to the financial sources. After three years of experience it is important to evaluate the effects of this regulation and to give a short-term prognosis based on learnings. Purpose of our research was to collect and evaluate data to enable a many-sided analysis of residential construction industry in the recent past. Areas of our analysis were as follows: trend in number of construction and occupation permissions; size, location, price/sqm and technical content of residential projects starting after 2015; change in the number and sum of support applications; ratio of credit in support applications. According to our results there are areas where fine-tuning of regulation is necessary. Firstly, location and price of several projects shows that not always indigent families make use of state support. Secondly: growing number of residential projects is partly caused by postponed and advanced constructions. Therefore, capacities of the industry cannot be used balanced. Thirdly: current projects are planned to be finished by 2020 because reduced VAT for the industry is valid only until then. Further support of residential market is questionable and may effect problems in continuous and sustainable development. Fourthly: lack of minimum energetic efficiency in regulation effects a lot of new-built flats which will be inefficient by 2021.

1. Introduction
Huge expectations are connected with the housing program (called CSOK in Hungarian) since its launch in July, 2015 by both households and members of construction industry. Vivid debates follow the extension and accessibility of preferences which are broadened since January, 2016. Beginning of 2016 it was well worth examining the factors which influenced specialties of Hungarian housing market since the political change in 1990. Focus of that research was to collect information about the contribution of housing policies on construction industry and housing conditions in the last 25 years. At that time, we only had the chance to forecast how new regulation would support households in buying or building a new flat and how it can help the revival of the industry which suffered enormous losses after economic crisis in 2008. Now we feel topical the investigation of the effects on the actors of housing market in the last two years.

We only took into consideration new-built flats in our current research. Reasons for narrowing our research are firstly because state supports these much more that used ones with higher demandable...
amount, secondly because activity on these is better monitored by statistics thus offers a more adequate database to analyze.

2. Material and Method
We conducted our research and analyses in the following areas:

1. Based on data of Hungarian Statistical Office we analysed residential new-builds of construction industry between 2013 and 2017:
   1. comparison of number of building permits and authorizations of occupancy respectively number of simplified procedures regarding new-built flats with under 300 square meters
   2. analysis of location of new-built flats. Location was investigated in two viewpoints: size of the settlement where it was built and situation within the country
   3. collection of information about the intensity of demanded support by households:
      • change in number and amount of disbursement
      • effects of the elements of housing support system on households and construction industry

2. According to territorial distribution of building permits and authorizations of occupancy in Hungary we selected arbitrarily residential condominium projects for analysis. Four projects in Budapest, two-two in cities with county rights, two-two in smaller cities and one in a village. We prepared the sample to be as balanced as possible to enable conclusions. Projects were chosen in Budapest from districts where new-built flats are the most frequented. Cities with county rights were chosen from both east and west part of the country. Information about the projects was collected from the internet and the investor itself where it was necessary. Data was analysed according to the following:
   • size of flats: range of useful floor area in square meters. It was also analysed whether customer could benefit from housing support: what ratio of flats offered reach the minimum regulation of 60 square meters to enable maximum support.
   • technical amendment: we analysed building materials and energy saving engineerings used at the projects. Comparison was made among the projects and compared to new regulation as of January, 2021.
   • relative price level: comparison in price per square meter was made among the projects and to its location and technical amendment.

3. Results and discussions

3.1. Analysis of residential new-builds of construction industry, based on data of Hungarian Statistical Office
3.1.1. The amount of building permits and authorizations of occupancy A 14.389 new apartments were built in 2017, 44% more than a year earlier (table 1). The amount of building permits and the simple announcements issued was 38.997, 20% more than in 2016. Number of new-built flats stagnated between 2013 and 2015, after that began to grow gradually, in 2017 there was a huge grow suddenly, the data can be found in table 1. Compared with the building permits, which amount has risen steadily since 2013, with a leap in 2016. The different increase in the building permits and the number of new-built flats is due to the fact that the building permits which have been given in in 2016 were mostly completed in 2017. The constructions of new-built flats are still almost half the proportion between natural people and businesses. It would suggest that the building operations are not only for own use, different companies see business opportunity that they are able to satisfy the demand.
Table 1. Amount of building permits and new-built flats, 2013-2017

| year | building permits | new-built flats | distribution business | distribution natural person | distribution business | distribution natural person |
|------|------------------|----------------|-----------------------|-----------------------------|-----------------------|-----------------------------|
| 2013 | 7 536            | 7 293          | 2 924                 | 4 167                       | 41%                   | 59%                         |
| 2014 | 9 633            | 8 358          | 3 236                 | 4 911                       | 40%                   | 60%                         |
| 2015 | 12 515           | 7 612          | 2 999                 | 4 476                       | 40%                   | 60%                         |
| 2016 | 31 559           | 9 994          | 4 958                 | 4 852                       | 51%                   | 49%                         |
| 2017 | 37 997           | 14 389         | 7 023                 | 7 309                       | 49%                   | 51%                         |

The amount of constructions by natural people increased by 50% in 2017 based the previous year. It can be seen from the statistics that the increase in the amount of new-built flats by businesses can be made earlier than by natural people. In the background of not the same amount of growth can be that the enterprises have seen profitable business opportunity in the appearance of the housing support, thus they begun to build a large amount of flats which are suitable for application of housing support.

The amount of building permits compared to 2014 increased by one and a half times to 2017. Figure 1 shows that there was a sudden growth in the amount of new-built flats after the introduction of housing support. The building industry was not able to react immediately, the fastest reactions were made by the investments which were stopped during the crisis, followed by the simplified procedures.

Figure 1. Amount of new-built flats and building permits, 2013-2017

The reason for the higher increase in building permits can be that after the building permit has been issued, the construction will commence, and after the authorization of occupancy it is possible to count as a new-built flat. Therefore, the increase is likely to be reflected in the amount of new-built flats.

3.1.2. Regional distribution of new-built flats. In 2013, the amount of issued building permits was different from the regional point of view, the western part of the country and the capital city and it’s agglomeration much more building permits were issued than in the eastern and northern region of the county (table 2). On the basis of 2013 number of building permits increased 7,4-fold to 2017. Looking the same time horizon, the increase was 3,36-fold in the West region and 3,81-fold in the East region. Total number of building permits issued was 58% in the central region in 2017, while that rate was only 39% in 2013.
Table 2. Change of the amount of building permits by regions, 2013-2017

| Regions                  | Amount of building permits |
|--------------------------|----------------------------|
|                          | 2013 | 2014 | 2015 | 2016 | 2017 |
| Central region           | 2,968| 3,778| 5,800| 15,014|21,966|
| Middle-West region       | 518  | 662  | 742  | 2,468 |2,825 |
| West region              | 1,949| 2,558| 2,969| 5,836 |5,648 |
| South-West region        | 617  | 734  | 610  | 2,380 |1,894 |
| West region total        | 3,084| 3,954| 4,321|10,684 |10,367|
| North region             | 250  | 319  | 313  | 986  |1,183 |
| East region              | 610  | 763  | 1,169| 2,800 |2,561 |
| South-East region        | 624  | 819  | 912  | 2,075|1,920 |
| North and East region    | 1,484| 1,901| 2,394| 5,861 |5,664 |
| Total                    | 7,536| 9,633|12,515|31,559|37,997|

The most significant increase is in the capital, where over five years the amount of building permits increased more than 10-fold. In Budapest there was no increase in the amount of authorization of occupancy, in towns and villages that amount increased more than one and half time in 2017 compared to 2016 (table 3). Total amount of building permits was 37,997 in 2017, the average increase is 20%. In the capital more than one and half time, in the cities with capital rights there is 9% decrease. Builders used simplified procedures in 36% of cases. The mentioned rate is 10% in Budapest, increasing towards to the lower territorial units. In three quarter of the cases, projects in villages used simplified procedures.

Table 3. Amount of building permits and authorizations of occupancy by type of settlements, 2016-2017

| Type of settlement       | building permits | authorizations of occupancy |
|--------------------------|-------------------|-----------------------------|
|                          | 2016  | 2017  | simplified procedures | change in 2017 based on 2016 [%] | 2016 | 2017 | change in 2017 based on 2016 [%] |
| Budapest                 | 9,364 | 14,632| 1,530 | 156.3 | 2,777 | 2,761 | 99.4 |
| cities with county rights| 8,953 | 8,151 | 2,683 | 91 | 2,762 | 4,162 | 150.7 |
| other cities             | 8,907 | 9,727 | 5,475 | 109.2 | 2,814 | 4,761 | 169.2 |
| villages                 | 4,335 | 5,487 | 4,156 | 126.6 | 1,641 | 2,705 | 164.8 |
| total                    | 31,559| 37,997| 13,844| 120.4 | 9,994 | 14,389| 144 |

Looking at the country’s segments and counties, there is a steady increase in the amount of new-built flats per 100,000 inhabitants in most of the counties. However, there are counties where, in the 4-year period examined, growth is not continuous, there are stagnations or downsides. These counties are located in the eastern part of the country. Győr-Moson-Sopron, which is located in the western part of the country, is significantly visible around all the other counties as it can be seen in figure 2. This is probably due to the fact that several multinationals are settled in the region, which employ a large amount of workforce. Furthermore, it can be seen that the effects of housing support are felt everywhere, except for a few counties in the eastern region. The amount of new-built flats per 100,000 inhabitants is considerably higher in 2016 than in the previous year and the value has continued to grow in 2017.
The amount of new-built flats (figure 3) per 100.000 inhabitants cumulatively between 2014 and 2017 suggests that the country is centralized. In western part of the country this figure is above average, especially in the county of Győr-Moson-Sopron. The reason for this is probably that the majority of multinational companies prefer the western part of the country from logistical point of view, so there is a huge demand for human resources that triggers a western migration within a country. Nevertheless, the country is centralized on several aspects, so the absorption power of Budapest and its surroundings remains dominant. The construction projects are mainly related to the central Hungarian region. Budapest, Győr, Debrecen, Székesfehérvár and Siófok are the location of such investments. The northern region is a file-closer among the total value of the investments started.

**Figure 2.** Amount of new-built flats by countries, 2014-2017

**Figure 3.** The amount of new-built flats by counties total 2014-2017

**3.1.3. Intensity of housing support demand** There are three main elements in the support program. It is important to have an insight on them to better understand how these have impact on the industry. As it is not purpose of our article to have a detailed introduction only a quick overview is given in the following. Families can request non-refundable support according to the number of children (existing

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**Table:**

|   | Bp | B-K | Bar |
|---|----|-----|-----|
| 2017 | 158 | 103 | 92  |
| 2016 | 158 | 48  | 42  |
| 2015 | 110 | 43  | 52  |
| 2014 | 45  | 14  | 14  |

|   | B-A-Z | Cs  | Gy-M-S | H-B | J-N-Sz | K-E | N  | P  | S  | Sz-Sz-B | T  | Vas | Yes | Z  |
|---|-------|-----|--------|-----|--------|-----|-----|-----|-----|---------|-----|-----|-----|-----|
| 2017 | 34    | 136 | 89     | 594 | 111    | 47  | 113 | 14  | 274 | 159     | 68  | 66  | 149 | 121 |
| 2016 | 34    | 103 | 75     | 334 | 84     | 51  | 30  | 12  | 65  | 165     | 69  | 39  | 51  | 136 |
| 2015 | 34    | 103 | 75     | 334 | 84     | 51  | 30  | 12  | 65  | 165     | 69  | 39  | 51  | 136 |
| 2014 | 34    | 103 | 75     | 334 | 84     | 51  | 30  | 12  | 65  | 165     | 69  | 39  | 51  | 136 |
or planned to be born in 10 years) in the household. Amount of subsidy is not too much if there are only one or two children (1.875 and 8.125 euros). On the contrary three or more children are supported with 31.250 euros which is a considerable difference. Second element of the system is a long term loan with fixed and supported interest rate. Third element is connected to VAT payment. In case of a new flat purchase buyer only pay 5% VAT instead of the normal 27%. In case of constructing the new flat on their own families can request tax return up to the amount of 15.625 euros.

Data about the most attractive element (non-refundable) can be found in table 4. Information about the first half years comes from Central Statistical Office but the fourth one is from governmental communication as data is not available at the time of our research.

| Table 4. Number and amount of housing support, 2016 - 2017 |
|----------------------------------------------------------|
|                                | 2016 I | 2016 II | 2016 total | 2017 I | 2017 II | 2017 total |
| number of supports (pcs)       | 7660   | 13091   | 21000      | 12760  | 32240   | 45000      |
| amount of support (mio euro)   | 45     | 103     | 148        | 86     | 341     | 427        |
| amount per support (euro)      | 5834   | 7901    | 7054       | 6759   | 10565   | 9486       |

Comparing first half years of housing supports (2016 and 2017) unequivocal growth can be seen. Although 2017 first half could be considered for the first sight as relapse there is a clear reason behind. Construction industry has a seasonal periodicity as weather conditions do not allow continuous work. Projects whether private or entrepreneurial often start to be built in spring and since support is ex-post financing as it can be payed only after certain percent complete it appears in statistics only later. Analysing the average amount per disbursement our experience was that state supported purchase of new-built flats with the highest amount (18.437 euro). Construction of a new flat was supported with 11.875 euro whilst purchases of used flats received only 4.690 euro. Statistical data is available only for 2016, but calculation from governmental communication shows that for the second half of 2017 average amounts per disbursement will rise further.

Second element of housing support is state supported loan for households. These have a fixed interest rate at 3% for the whole duration (maximum 25 years). Many households in Hungary got into trouble because of variable rate mortgages in the near past thus it is a very important element. Some further costs are added caused by banking administration. Market based loans have a higher interest rate and there are other supported mortgages besides this system. Figure 4 shows that whereas in the years of economic crisis no state supported loans were available, in first half of 2017 16% of mortgages were supported. It also turns out from statistical data that ratio in value is higher than ration in number of loans. From this fact we may conclude that those who request bank loan can ask for and also receive higher amount.
Figure 4. Amount of state supported and not supported housing loans (*2017 only first half year)

Third element of the support system relates to possibility of reduction or pay-back of VAT. This facility is limited in time as it is only available until end of 2019. Although there are negotiations about to extend the deadline the result is uncertain. Also analysts highlight this problem (BuildEcon, 2017). To our opinion this deadline is one of the most important reasons why most of the projects are planned to be handed over by 2020. Though this date is not too far in construction computation of time it is hard to find any project which would be ready afterwards. According to EBI Construction Activity Report (2017) number of construction of condominiums (more than four flats) has grown in the highest extent and the timing of these (2017 and beginning of 2018) shows the intent of taking advantage of VAT reduction.

Value of residential projects reached an 18-year record in first half of 2017. This fact awakes special attention in the background of available social-political housing support since 1994 in Hungary to facilitate households’ residential investments. Amount of it grew in 2004 and in the next year to somewhat compensate value loss caused by inflation and increase of construction costs. In 2013 a new housing policy was launched but this had not sufficient influence on boosting residential construction. Support system which is subject of our article was extended as of beginning 2016 and preference also enterprises with the possibility of VAT reduction. Results show it unequivocally in ratio change projects started by households and enterprises. As shown in 1.1 flats were built rather by enterprises than by households as of 2016 in contrary with the trend before which showed a higher activity by households. We may conclude that facilitation in VAT payment has a significant impact on projects and construction industry output. Though it also has a negative effect which is worth mentioning. Every development either of a living organism or construction industry is more healthy and sustainable if it is balanced. State intervention into market development needs to be really prudent. It is subservient to avoid factors which would cause cyclic fluctuation. A preference which is available only for a short time (2016-2019/20) will take effect on unbalanced growth: it increases uncertainty of actors and effects advanced investments of households and enterprises. Our results are parallel with the ones of Varga (2018) as current form of housing policy does not support organic development of construction industry.

3.2. Analysis of residential building projects appropriate for housing support
3.2.1. Size of flat, number of rooms, possibility of housing support claim We observed the following while examining the projects chosen: assortment of flats is the widest in Budapest. Both biggest (five
rooms, 115 sqm) and smallest (one room, 35 sqm) flats are offered in the capital. Small flats perfectly serve demand of those who want to live near the city centre with good public transfer options. Investments in cities with county rights offer 2-4 rooms in a flat. Accordingly the smallest floor area is higher here (as of 45 sqm). In the category of other cities flats are rather smaller (47-84sqm), but have more rooms (2-4). According to our result the background for it in Balatonlelle may be the holiday function instead of residential one. In Nyírbátor a reason behind can be lower solvency. Besides, the projects own website positions itself as „the rental of workers of successful international companies” thus small flats are ideal for this purpose. Project in the village covers the largest flats which include three to five rooms and a floor area of 98-133 sqm. It is understandable as ground prices are the lowest here thus investments can allow larger surface.

Both developments in the eastern part of the country offer smaller flats with same room number in their own category (cities with county rights and other cities). To our opinion the reason behind is lower solvency and this effects demand for smaller flats. Besides it is observable that in bigger cities (with county right) flats have larger floor area which we regard to better financial potential of buyers. Room number of flats was also evaluated in background of housing support. Maximum level of preference is connected to three children thus we analysed how the amount can contribute to a purchase of a larger flat. Although all the projects analysed offer flats with over 60 sqm-s which is the minimum size for maximum support three children and the parents can live in separate rooms in two of the developments in the capital and in the village. In each of the others either 2-3 children will have the same room, or the parents have their bedroom function in the already functionally overloaded kitchen – dining room – living room.

3.2.2. Contribution of housing support to energy saving potential of residential buildings. Households consume approximately on third of primer energy in Hungary which is mainly because of housing deprivation (Energiaklub, 2016). The country relies on energy import thus it is crucial to reduce energy demand of dwellings. Information examined in subsection 3.1.1. showed significant increase in number of new-built flats in the last two years. Based on the number of build permits it can be presumed that this tendency will increase further in the near future. Since dwellings built now with state support will influence energy consumption for the next 25 years it would be expected that these developments incorporate solutions which are future oriented and energy conscious. Our research also examined how new residential developments correspond energetical regulations which become more severe. Evaluation was made according to current and coming (in 2021) regulations. As ordinance will become stricter professionals suggest designing houses already now accordingly. It is not the purpose of our article to introduce the new values in detail we demonstrate with two drawings (figure 5) level of changes.

Figure 5. Necessary thickness of thermal insulation using Austrotherm Grafit Reflex according to current and 2021 regulation
Hungarian Green Building Council prepared a research by the end of 2017 amongst developers of large residential projects in Budapest to examine how environmental awareness of the projects effects purchase decisions to their opinion. Their results - unfortunately not surprisingly – do not show the necessary way to future. With respect to developers’ opinion for the majority of buyer’s location, price and size of the flat is the most important at buying decision. Sustainability which was examined by the importance of energetic classification and expected utility prices are only in the second row. According to developers currently only few buyers would pay for a higher level of the latter.

Technical amendments of projects chosen for our research allow to conclude that not only developers in Budapest but also those on the countryside agree that it is not worth to invest in high-end engineering solutions and thick thermal insulation as there will be no pay-off by the market. Based on the information available only one project in the capital will have 20cm thermal insulation on the facade. All other projects only aim at the lowest level of insulation needed currently. There are projects which claim to be „environmental aware” or „energy saving” but use no advanced technologies or materials like three-layer windows, thick insulation, energy saving ventilation, renewable energy etc. Projects with higher price level offer air conditioning preparation which means that developers count with overheat of flat in summer.

3.2.3. Average price level of flats. There are tremendous differences between projects in specific price level (figure 6). In the village which is located near the capital and in Nyírbátor (most eastern corner of the country) price per square meter of flats offered is almost the same. 25% price premium is to be observed in the two cities with county rights (Debrecen and Gyõr) whereas there is no difference amongst them although these are in the „poor” and the „rich” part of Hungary. Presumably closeness of lake Balaton and holiday function of the flats in Balatonlelle explain that price per square meter level reaches the one of cheaper projects in the capital. Outstanding price level in the capital was expectable. In case of two projects it is more than double than prices in cities with county rights. Let’s look at how much a family gains if they receive a support. Unfortunately, prices are increasing since 2010 (figure 7) thus households can lose this advantage with time.

Families with three or more children need flats with more rooms. These are firstly rare on the market secondly the prices are very high compared to the support. It means that regulation presumes that households have serious own contribution in money or a marketable flat.

4. Conclusions
Target of our research and article is to examine how housing support starting in July 2015 and extended more times since then effects households in access to a flat, enterprises and construction industry itself. There are several positive effects however negative ones should not be swept under the carpet. Support system preferences families with three children offering the highest possible amount for them to stimulate parenthood. This noble objective disadvantages families with less children. Continuous increase in price level of flats consumes amount of support. It is important to keep in mind that there are
projects which do not target residential objectives rather holiday or investment ones and state also supports these from public funds.

Level of residential construction has grown almost three times to 2016 after the most difficult years in the crisis. One can appoint that regulation generated favourable environment for enterprises with two ways: VAT preferences and demand increase by households.

It must also be concerned besides all positive results whether surplus in demand generated by housing support will be substantial or not. Based on analysis of statistical data for longer period may conclude that social-political preferences result only breakouts in construction trends as the only revive behindhand investments and pre-empt future ones. The latter will be missing in years when support is over. Besides growth forced for a short period claims capacities which are not available still increase prices. This would only mean an unhealthy, non-sustainable short term growth for construction industry.

According to our opinion it is not ideal that housing support is outstandingly preferencing new constructions in the background of deprived, outdated and old flat stock of Hungary. As our result show however many new flats are built now and in the near future, energy efficiency of these will not be a good example. Level of refurbishments is unfortunately not sufficient to revive flat stock in general. On the whole it can be stated based on our results that current housing support advances families and enterprises on short term however it is important to strive for balancing long term effects.

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