

Some Social and Economic Aspects of Housing—An International Comparison

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There are two points to be borne in mind in connection with the comparisons made in this paper. The first is that all comparisons based on international statistics are affected by the reliability and comparability of the different sets of figures and any conclusion drawn must, therefore, be regarded with reservation. On the other hand, a fair degree of comparability has now been achieved in the statistics used in this paper so that, in general, it may be taken that the comparisons made tend to give a picture of the actual situation which is broadly correct. Where necessary, attention is drawn here and there in connection with particular sets of figures to any known defect in comparability.

The second point is that housing is part of an individual's or a nation's standard of living and hence is properly related to the general wealth or poverty of the individual or the nation. Measured in terms of gross national product per capita we are not particularly wealthy among Western European countries—Portugal, Greece, Spain and Italy are poorer, Austria is somewhat richer while all the other countries are from 50 to somewhat over 100 per cent. wealthier than we are. This international scale of prosperity should, therefore, be borne in mind in any comparisons made in regard to housing between Western European countries.

The paper is divided into three main sections. In the first the present housing situation here is examined by reference to other countries, in the second some social characteristics of post-war residential construction here and elsewhere are compared, and in the third some economic comparisons are made between post-war residential construction here and in other countries.

I—PRESENT HOUSING SITUATION

Stock of Dwellings

The number of dwellings occupied and vacant per 1,000 inhabitants in Ireland is estimated to have been about 260 at March 31st 1959. This estimate is based on the 1946 Census figures with additions for dwellings built since and deductions for dwellings lost through all causes. The annual loss of dwellings since 1946 has been assumed to have been 4,000. This is derived from an actual loss of about 3,000 dwellings annually between 1926 and

1936 and about 4,500 dwellings annually between 1936 and 1946. A net annual loss of 4,000 dwellings in the years 1946-1959 may well be an understatement. Those years saw a more sustained rehousing from unfit dwellings than either of the two earlier periods. Also, between 1946 and 1959 the population fell by over 100,000 as compared with a fall of 17,000 only between 1926 and 1946. On the other hand, if the rate of loss postulated for 1946-1959 is halved, the effect would be to increase the number of dwellings per 1,000 inhabitants to about 270. It is evident therefore that 260-270 dwellings per 100 inhabitants is a maximum figure.

A stock of dwellings of 260 per 1,000 inhabitants would be a distinct improvement on the 232 we had in 1946, 223 in 1936 and 226 in 1926.¹

These estimates for 1959 include an estimated 10 dwellings per 1,000 population vacant, i.e., somewhat less than 30,000 dwellings. This may be compared with 31,148 dwellings vacant in 1946, 32,548 (of which 6,773 were not habitable) vacant in 1936 and 44,466 vacant in 1926 (census dates). While it may be assumed that many of the vacant dwellings at the censuses were abandoned rural dwellings which had effectively fallen out of stock, a comparable figure is included for 1959 for the purpose of comparison with other countries.

It will be seen from Table I when allowance is made for the dates to which the figures relate that a stock of dwellings of 260 dwellings per 1,000 population is not a particularly large stock by comparison with other countries in Western Europe. The United Kingdom, Switzerland and Norway have probably by 1959 at least 300 dwellings per 1,000 population. Thus the majority of other countries have from 50 to 100 dwellings per 1,000 more than we have. On the other hand we would appear to have a somewhat larger stock of dwellings than Italy, Western Germany and the Netherlands who have now probably from 250 to 260 dwellings per 1,000 population and a considerably larger stock than Spain and Greece who probably are still at the 220/230 dwelling level. The number of dwellings per 1,000 inhabitants in Portugal is probably still around 270 having regard to the level of housebuilding and the rate of population increase since 1950.

The countries with a smaller stock of dwellings than Ireland are, however, the countries in Western Europe with the greatest housing shortages. Large housing programmes are envisaged in these countries for many years to increase the stock of dwellings. At a time when demand for new dwellings has fallen off here it seems surprising that the stock of dwellings should appear to be only slightly greater than in some countries with grave housing shortages and considerably less than in countries with more satisfactory housing conditions. This, however, is explainable by the particular structure of our population.

The main demand for separate dwellings is by married couples. Married couples form (1951) only between 15 and 16 per cent. of

¹The fact that the number of dwellings per 1,000 inhabitants declined between 1926 and 1936 indicates the extent to which dwellings were lost.

our population as compared with from 20 to 25 per cent. in other Western European countries.² This low proportion of married couples reduces considerably the need for dwellings here. A normal proportion of married couples would create a need for 150,000 to 300,000 additional dwellings or from 50 to 100 more dwellings per 1,000 inhabitants.

The second highest demand for dwellings is by widowed persons. Our proportion of widowed persons (6 per cent. in 1951) tends to be somewhat less than the proportion of widowed and divorced persons in some other countries with a larger stock of dwellings, e.g. Denmark and Belgium 7 to 8 per cent.

The remaining demand for dwellings is by single adults living outside the parental home. This demand is lower here since so many of our single adults when they leave home leave the State. Factors not operative here to the same degree which increase the demand for dwellings by single adults in other countries are migration into the towns from the countryside and the pressure to leave small and crowded parental apartments. Improved economic conditions in other countries have also reduced the need for families to take in boarders.

The lower demand for separate dwellings by single adults here is placed in relief by the following comparison: In Belgium when (1947) all the married couples are housed and 80 per cent. of the widowed and divorced, there remain dwellings for 40 per cent. of the single adults aged 30 and more. In Sweden on a similar basis there was in 1954 a supply of dwellings for about 60 per cent. of the single adults aged 30 and more. In Ireland, in 1951 (the latest date for the information on conjugal conditions) it is estimated that on the same basis there remained dwellings for little more than 10 per cent. of the single adults aged 30 and more.

The lower stock of dwellings here is also related to the fact that, on the evidence of the 1946 Census, the percentage of our population living outside private families, viz. 7 per cent., is higher than what is usual in other countries, viz. 3 per cent.

The small relative stock of dwellings required here because of the present structure and movement of our population is a fact of some economic significance. It establishes a lower need for social capital represented by dwellings and ancillary services as compared with other countries and reduces significantly the competition between social and productive investment here. The potentially restricted market available to the house building industry underlines the need for low costs in order to increase this market.

While it is evident from the structure of our population that we require a relatively small stock of dwellings the extent to which the present stock of dwellings is adequate can be fully assessed only in the light of information relating the number and composition of households to the number of separate dwellings. The information available from census returns assumes that any set of rooms occupied by a household is a dwelling; in practice some proportion

²For example, 23 per cent. in Denmark (1950), 21 per cent. in the Netherlands (1954) and 25 per cent. in Belgium (1947).

of such "dwellings" (e.g. where two separate households share a dwelling) falls short of an acceptable standard and represent in fact a need for an additional dwelling. In addition some proportion of households will contain a second natural family (e.g. married son or daughter) which represents a greater or lesser potential need for an additional dwelling in the light of social and economic conditions. It is now increasingly accepted that measurement of housing needs, actual and potential, is best made from an analysis of the numbers and composition of households in relation to the number of separate dwellings.

Average Number of Persons per Room

The other crude indicator of housing conditions is the average number of persons per room. The 1946 Census showed that density of occupation declined here from 1.19 persons per *occupied* room in 1926 to 1.09 in 1936 and to 1.01 in 1946. It is impossible to estimate a similar figure for 1959 but certain broad indications of how the current position here in this respect compares with other countries may be given.

Table 2 shows the number of persons per room in Western European countries on the most recent date for each country for which information is available. The information relates to *total* population and *total* rooms whether occupied or vacant. This increases the number of persons per room as compared with the average number of persons in *private families* per *occupied* room (which it has been noted was 1.01 in Ireland in 1946). The figures for Ireland are the most out of date but the Table is of interest, since it illustrates the current international scale which applies to this measurement of housing conditions.

Calculations suggest that the average number of rooms per dwelling in Ireland would now require to be from 4.2 to 5.4 to give a density of from .90 to .70 persons in the total population per room in the total housing stock occupied and vacant. As the average number of rooms per dwelling in 1946 was 4.1 and may be assumed to have increased since in view of the preponderance in new construction of dwellings with five or more rooms, it seems that the number of persons per room here may now have fallen below .90 persons per room. Given the rigid structure of demand already noted for dwellings and the above-average proportion of children in the population, .90 persons per room would not seem to be an unreasonable figure compared with countries with a larger number of households of a smaller size.

Average Size of Dwellings in Housing Stock

The average number of rooms per dwelling here in 1946, i.e. 4.1, is higher than the average number at later dates in the majority of Western European countries. Our relatively large dwellings must, however, be judged against the fact that our households are (1946) the largest among countries for which information is available. Table 3 contains the latest available information for each country of average number of rooms per dwelling and average number of persons per household. Only six countries had a higher average number of rooms per dwelling.

The average number of rooms per dwelling has increased here from 3·7 in 1926 to 3·9 in 1936 and to 4·1 in 1946. This rate of increase suggests that the average number of rooms per dwelling here now might not be much greater than 4·5 which would, however, give a density of somewhat less than ·90 persons per room (including vacant rooms).

Quality of Dwelling Stock

The present age-distribution of a country's dwelling stock is related to population movements in the past hundred years or so, assuming that to be the effective life of most stone or concrete houses. Population increases in that period, particularly in urban areas, caused new dwellings to be added to stock. Depending on whether the main population increases occurred in this or the last century, the dwelling stock will contain a high proportion of relatively old or relatively new dwellings. The big increases in urban populations in England in the last century are the origin of present slum-clearance problems in English cities; on the other hand the main increases in urban populations in Scandinavian countries occurred in this century and the urban dwelling stock is, therefore, relatively new. Rural populations in most countries in Western Europe also increased well into the present century and helped to add new dwellings to the stock. France was a notable exception to the latter trend and as a result a high proportion of the rural dwelling stock is old—more than half over 120 years old.

The heavy overall decline in our population in the past 100 years has acted to reduce the proportion of new dwellings added to stock in that period, particularly as that decline occurred in both urban and rural areas until about 1900. The increase in urban population since (about one-third) is moderate by comparison with the doubling and trebling of urban population which have occurred in many other countries in this century.

The population developments—and the loss of dwellings through war damage—are the background from which Table 4 emerges. This Table indicates that the proportion of our dwelling stock, which was built in the last 40 years or so, is low by comparison with six other countries in Western Europe for which information is available. It is estimated that about one-third of the dwelling stock in Ireland has been built in the last thirty to forty years. The available information suggests that in the other countries from half to two-thirds of the present dwelling stock has been built in the same period. Even if dwellings reconstructed here with the reconstruction grants available since 1926 are taken into account, the proportion of our dwelling stock built or reconstructed in the last 40 years or so would be about 40 per cent., which is an unfavourable proportion compared with the 6 other countries. The average age of our dwelling stock, however, would appear to be appreciably lower than in France and it is probable that we would compare favourably, also, with Austria,³ Portugal and Spain.

³It has been officially estimated that two-thirds of farm dwellings in Austria are over 100 years old.

The fact that our dwellings are usually of stone, brick or concrete with slated or tiled roofs ensures a longer life than in countries where more perishable materials are used. Thatch roofs, which require careful maintenance and frequent renewal, are, with the disappearance of skilled thatchers, a weakness in our rural dwelling fabric. A dwelling built here before 1860 must, however, be regarded as *prima facie* obsolescent. It is possible to make certain estimates on this basis to assess the potential rate of obsolescence.

Between 1900 and 1918 local authorities built some 50,000 dwellings. There are no records of dwellings built by private persons in the same period. Even if the number of the latter be put at another 50,000,⁴ it may be concluded that somewhat less than half our dwelling stock dates from 1900. The remainder, amounting to some 380,000 to 400,000 dwellings, consists, on this calculation, of dwellings sixty years old and more. Even assuming that all these dwellings were built from 1860 onwards⁵ and on the basis of a theoretical "life" of 100 years one may envisage from 1960 onwards a potential rate of obsolescence of this part of the dwelling stock of 2.5 per cent. or up to 10,000 dwellings per year. This potential rate of obsolescence underlines the importance of the measures being taken to encourage and assist the reconstruction and repair of dwellings. It is not possible from available data to assess the relative age of the town and rural dwellings stock separately other than within very broad limits. These limits are that in town areas possibly up to 60 per cent. and in rural areas only about 40 per cent. of the dwelling stock has been built since 1900. Reconstruction of dwellings is to date twelve times more frequent in rural areas than in urban areas. If reconstruction is included, probably up to 50 per cent. of the rural dwelling stock has been built or reconstructed since 1900.

Table 5 shows how our dwelling stock compares with that of other countries as regards piped water within the dwelling and a bath. The figures for Ireland are the most out of date, but it is clear that as regards piped water within the dwelling we lag behind virtually all countries; apart from economic considerations, the scattered settlement of our rural population is a big causative factor here. This comparison provides the background to the recently announced ten-year programme to extend public and private piped water services. The proportion of dwellings here with baths in 1946 was higher than in richer countries, e.g., Belgium and France. Generally, except in Switzerland and the United Kingdom where about two-thirds of dwellings in 1950/51 had baths, the dwelling stock in Western Europe is very much

⁴If one assumes a rate of obsolescence between 1901 and 1926 equivalent to that which actually operated between 1926 and 1936, i.e., 3,000 per year (and it was more likely to be less) and given the known local authority construction one may calculate (from the Census stock of dwellings for 1901 and 1926) that private dwellings erected between 1901 and 1926 amounted to about 35,000 dwellings. Another indication is the fact that in *all* Ireland at the Census dates in 1901 and 1911 there were 2,536 and 3,608 houses respectively being built.

⁵This postulates an annual completion rate of 10,000 dwellings between 1860 and 1900. In fact at all five census dates from 1861 to 1901, the number of houses being built in *all* Ireland varied between 1,700 and 3,000 suggesting an average completion rate of say 2,500 per year for the whole country.

deficient in baths. The Netherlands in 1956, for example, had a bath in little more than quarter of the dwelling stock. Our comparative position, generally, is good in respect of this item.

II—SOCIAL CHARACTERISTICS OF DWELLINGS BUILT 1949-1958

Volume of Residential Construction

Table 6 shows the average annual number of new dwellings completed per 1,000 inhabitants during the years 1949 to 1957 in Western European countries. Measured in this way the volume of our housebuilding programme was not particularly great. The countries which built a smaller number of dwellings per 1,000 inhabitants include three poorer countries and France, where housing has lagged behind in post-war reconstruction. Greece makes a surprisingly high entry in this table but that is because housing conditions there are the worst of the countries listed and a large proportion of new dwellings are small rudimentary structures erected in the rural areas by the labour of the owners.

Since the size of dwellings may vary considerably, another idea of the volume of dwelling-accommodation provided per 1,000 inhabitants is gained if the dwellings are converted into average number of rooms. This has been attempted in Table 7, with, it is believed, fairly close approximation. This alters Ireland's place in the table relative to Finland, Denmark, Austria and Greece who are estimated to have a lower output than Ireland when measured in rooms per 1,000 population. The output of dwellings may be a more reliable social criterion than output of rooms since the number of rooms must be judged by the size of the households. In economic terms, the output of rooms may be a better index of resources absorbed, etc., but this is not necessarily so as the size, quality and standard of construction of rooms will vary considerably.

Our relatively low output of new dwellings compared with other countries is due in the first place to the absence of war damage to our dwelling stock. A more important reason in the long run, however, is the demographic development here since the war. Our population declined by an average annual rate of 3·8 per 1,000 between 1946 and 1957. By contrast, Finland, the Netherlands and Western Germany had a corresponding rate of increase of 11·5, 13·1 and 12·1 respectively, due to natural increase and, particularly in Finland and Western Germany, to migration from lost territories. The effect on housing needs of a rate of increase in population of 12 per 1,000 may be readily appreciated by the realisation that to maintain existing housing conditions (about 250 dwellings per 1,000 inhabitants in the Netherlands and Western Germany) in the face of an annual rate of population increase of 12 per 1,000 requires the construction of 3 new dwellings per 1,000 population every year *before any inroads on existing shortages or deficiencies are made.*

Another indication of the uniquely low growth of demand for new dwellings here is provided by the net increase in the number

of married couples.* In the years 1946-1951, the net annual increase in the number of married couples here was 2,600, but between 1951 and 1956 it fell to 400. Over the ten years 1946 to 1956 the net annual increase in married couples was 1,500 equivalent to a net annual demand for new dwellings of less than 0.5 per 1,000 inhabitants. This may be compared with a net increase in the number of married couples in the early 1950s in some other countries as follows:—

Denmark: A net annual increase of between 11,000 and 13,000 equivalent to a need of from 2 to 3 new dwellings per annum per 1,000 inhabitants.

Norway: A net annual increase of 13,000 to 14,000 equivalent to a need of about 4 new dwellings per annum per 1,000 inhabitants.

Portugal: A net annual increase of about 30,000 equivalent to a need of between three and four new dwellings per annum per 1,000 inhabitants.

Sweden: A new annual increase of about 15,000 equivalent to a need for between 2 and 3 dwellings per annum per 1,000 inhabitants.

It is not suggested that the net increase in the number of married couples represents the total net demand for new dwellings since vacancies and new demand do not always coincide, but the figure does give an indication of the overall level of demand. The small rate of increase in the number of married couples is not unrelated to the high rate of vacancies experienced in local authority housing estates in recent years.

All countries, therefore, in Western Europe, excepting Ireland, can build from 2 to 4 dwellings per 1,000 population per year without any improvement in existing housing conditions. The level of new residential construction here since the war has, therefore, been mainly determined, on the one hand, by the rate at which existing shortages are being overcome, and the rate of replacement of defective dwellings and, on the other, by the degree of priority given to these measures in the light of social and economic considerations.

The volume of residential construction illustrated in Tables 6 and 7 relates only to new dwellings and omits residential reconstruction. The coverage of international statistics for the latter is not very wide and there are obvious problems of comparability between major and minor reconstruction works. It is evident, however, that residential reconstruction works have been considerably more important here than in any other country. In the ten years ended March 31st, 1959, an annual average of about 1.5 dwellings per 1,000 inhabitants were reconstructed here. This volume of reconstruction has been increasing in recent years and shows no sign of declining. In no other country for which particulars are available has reconstruction of dwellings in recent years amounted to even 0.1 reconstructed dwelling per 1,000 inhabitants except in

*Assumed to be equivalent to the net increase in the number of married women.

Western Germany where about 0.7 dwellings per 1,000 inhabitants have been reconstructed annually in recent years. In war-damaged countries there was a high volume of reconstruction in the early post-war years but, with the completion of this war-damage repair, reconstruction of dwellings as a feature of normal housing policy has been negligible even where public grants are available for it. Our good showing compared with many other countries in this respect is related to our relatively aged dwelling stock to which attention has already been drawn.

Size of Dwellings Erected

The average number of rooms in new dwellings erected here is the highest in Western Europe except in the Netherlands and, possibly, in the United Kingdom. This arises socially because the average number of children per married couple is higher in Ireland than in any other Western European country and because new dwellings have been provided virtually entirely for married couples. In other countries families are smaller and a larger number of dwellings are provided for single adults or elderly persons. The large number of rooms per dwelling here is possible because our one and two-storey construction is more economical than multi-storey construction elsewhere and because our housing subsidies are particularly high.

It has been noted that the average size of household here is the highest in Western Europe. This is due both to the large number of children per married couple and the small number of households with one and two persons. In 1946, the latest date available, 28 per cent. of households here had one and two persons. This may be compared with 47 per cent. in Belgium (1947) and France (1954), 37 per cent. in Great Britain (1951) and 32 per cent. in the Netherlands (1947).

The number of households of one and two persons increased here by 37,000 between 1926 and 1946. More significant from the housing point of view is that the number of dwellings of 4 and more rooms occupied by such households increased by 24,000 in the same period. The combination since 1946 of rent control with the lack of new subsidised small dwellings are factors which would tend to intensify that trend. Grants for conversion of dwellings may counter the trend in relation to the very large dwellings but nearly 70 per cent. of the 24,000 increase was in dwellings of 4 to 6 rooms. The increased emphasis in the major urban areas on flat construction and on central city redevelopment are other factors which will tend to favour increased construction of small dwellings by both private and public builders, particularly for elderly persons no longer needing a full-sized family dwelling.

Comparing the size of dwellings by number of rooms can be misleading as the size of rooms vary. The best comparison is on the basis of average floor area per dwelling and this comparison is made in Table 8 in so far as information is available. The average local authority dwelling here is larger than that provided in Austria, France, Belgium (flats), Western Germany and Denmark (flats) while smaller than that provided in Denmark (houses), the

Netherlands and Belgium (houses). An average over flats and houses in Belgium and Denmark would be larger than the average local authority dwelling here. Our average local authority dwelling is about the same size as the average Swedish dwelling and somewhat smaller than the average Norwegian dwelling but in the case of these countries there is only one class of dwelling. Our average private dwelling erected with grants appears to be the largest average dwelling in its class in Western Europe, with the exception of Belgium where the average comparable dwelling is somewhat greater. This comparison holds even where virtually all the private dwellings erected are aided as in the Netherlands, Sweden and Western Germany. This is a surprising comparison having regard to our relative economic position. This is largely due again, of course, to our larger families and to the fact that virtually the whole demand for new private dwellings—because of our population trends and our stage of economic development—arises from “*full-families*”, i.e. married couples with children desiring large single-family houses. The comparison with Belgium is significant as only one-family houses there are eligible for the grant to private housing. In other countries, too, space had to be sacrificed to quality, particularly in fittings and equipment, insulation and heating. Two points may be noted, however, in connection with the large average size of our private dwellings. Our minimum room area standards for these dwellings are higher than for local authority dwellings. The usual position in other countries is that the minimum standards for both types of dwellings are the same. The other point is that there is a tendency in recent years, particularly in the larger urban areas, to build a smaller full-family dwelling than was common some years ago. Thus, a significant number of 5-roomed private dwellings of 850-900 sq. ft. are being built now, whereas formerly the minimum private dwelling usually had 6 rooms and a floor area of 1,100 sq. ft. or thereabouts. The difference between the average size of local authority and private dwellings brought about by higher standards both prescribed and provided runs the risk of creating a social and economic gap between the two types of housing difficult for the working-class family to cross. This could continue the demand for local authority houses beyond a point when it should decline in favour of private owner-occupancy.

Prescribed Space Standards for Aided Dwellings

A study⁷ recently published by the Economic Commission for Europe enables a comparison to be made between minimum standards prescribed here and elsewhere.

This comparison shows that the minimum living area standards prescribed here for local authority dwellings are low and the minimum bedroom areas high by comparison with other Western European countries. Thus, our minimum living-dining room area is 16 m². The French standard is the same, the Portuguese lower at 12 m.² while all the others are greater, being greatest at 26 m.² in

⁷ *Utilization of Space in Dwellings*. Economic Commission for Europe, August, 1959.

Denmark. In the case of working kitchens roughly the same position obtains—the Portuguese standard of 4 m.² is the lowest, Ireland and France prescribe 5 m.² while the other countries have higher standards, Norway and the United Kingdom with 8 m.² being the highest.

For three bedrooms, on the other hand, the minimum total area here is 29-30 m.², which is the third highest standard, Western Germany with 33 m.² and Italy with 35 m.² being higher. In the majority of other countries the minimum total bedroom areas is from 24 m.² to 26 m.². The smaller bedroom areas elsewhere, however, appear only in multi-storey buildings where there is greater flexibility in fixing room areas. There are also some indications that the smaller bedroom areas are allowed only where there is a compensatory provision of built-in storage space.

The study also indicates that minimum ceiling heights are higher here than in many other countries. Our minimum is 2.43 m. as compared with 2.28 m. in the United Kingdom, 2.35 m. in Norway, 2.40 m. in Sweden and 2.30 m. in Belgium. Special attention has been given to ceiling heights in other countries in connection with multi-storey construction because a small reduction in ceiling heights may amount to an additional storey in a tall block.

The study also indicates that our minimum requirement for general storage of 4.6 m.² is at the lower end of the usual requirement in other countries, which is from 4 to 6 m.² and even up to 20 m.² where basements are incorporated in single family houses which is common practice in Scandinavian countries. These figures apply in practice only to the larger urban areas. In Ireland and in other countries general storage space in rural areas is usually larger but comparative figures are not available. Also, while economic circumstances here operate to keep living and bedroom areas close to the minimum, there is less uniformity in the provision of general storage space which varies with local custom and habit. The storage provision for food, household utensils, clothes, etc., also would seem to be small compared with many other countries.

It seems that by comparison with space standards found acceptable elsewhere our minimum standards for bedroom areas and for ceiling heights in local authority dwellings are such that some justification may exist for reducing them. Whether socially this is to be recommended would need to be examined in the light of an assessment of conditions in dwellings built to the present standards. Uniformity in the provision of storage space may also provide a possible economic gain, particularly if it were accompanied by standardisation of out-offices, cupboards, presses, etc.

There are somewhat higher minimum space standards here for private grant houses amounting to 55 sq. ft. more in the living-room and 30 sq. ft. more in the bedroom area in the case of a three bedroom house. The average private grant house exceeds the prescribed standards but, as was mentioned earlier, there is a growing tendency to build down to the minimum standards for private houses. Dual minimum standards are not usual in other countries because of the disadvantages of actively polarizing residential construction into working-class and better class.

Level of Rents

In a recent study⁸ the Economic Commission for Europe compared the level of rents in new social housing, comparable with our local authority housing, in Western European countries, taking as a basis of comparison the share of average male industrial earnings represented by average rents in a recent year. This comparison indicated that in France, Italy and Spain rents were somewhat less than 10 per cent. of earnings; in Ireland and the United Kingdom between 10 and 15 per cent. (Ireland being somewhat the lower); in Belgium, Denmark, the Netherlands, Sweden and Western Germany between 15 and 20 per cent., and in Finland somewhat more. In some countries, notably those in the first group, the share of new dwellings which were let at the rent levels cited was small, whereas here local authority dwellings have represented about half the new dwellings provided since the war. While average industrial earnings here do not provide as wide a basis of assessment as in more industrialised countries with full employment, the widespread application of differential rents tend to ensure greater uniformity in rent levels here as measured by share of income spent in rent. In general, differential renting ensures the rehousing of low-income families who elsewhere can be rehoused only in old dwellings or not at all.

The indications of rent levels in the various countries given by the foregoing comparison are borne out by the comparison made in Table 9 of the proportion of expenditure on personal consumption which goes in rent, in Western European countries. This is to be expected as the level of rents in new dwellings is naturally influenced by the prevailing general rent level. It is significant that Ireland finds itself in this Table in the company of Italy, Austria and France, three countries where virtually open inflation at a time of rent control destroyed the real level of rents. Rent decontrol policies are reflected in the increase in the share of personal consumption going in rent between 1952 and 1958 in all countries except Ireland and Austria.

In the case of owner-occupied dwellings, the E.C.E. study referred to⁹ indicates that downpayments on typical owner-occupied dwellings of modest price here—amounting to 5 per cent. of cost, where public loans are obtained—were lower than in any other country in the period 1956-1957. In the other countries at least 10 per cent. of cost had to be found from personal sources and 20 to 30 per cent. was a common figure. Where supplementary grants were paid here, the average grants amounted to 21 per cent. of the cost of a house costing £2,000. This compared with 20 and 17 per cent. grants in the Netherlands and Norway and 10 per cent. in Belgium and Western Germany. The annual loan charges here were higher than Austria, the Netherlands, Norway, Sweden and Spain, but this comparison must be made bearing in mind that the low down-payments here increase the loan charges to be paid, that the Irish terms apply to a greater number of houses than in, say, Austria and furthermore do not relate to sale of local authority

⁸*Financing of Housing in Europe*. United Nations, Geneva, 1958. ⁹*Ibid.*

houses, e.g., labourers' cottages which are sold on extremely favourable terms; if tenant-purchase terms for local authority houses were the basis of comparison, our figures would appear in a still more favourable light.

III.—SOME ECONOMIC ASPECTS OF HOUSING

Housing in the General Economy

A comparison has been made earlier of the volume of residential construction and reconstruction here and elsewhere in Western Europe. Table 10 compares the value of this volume as a proportion of gross national product and of all construction and works. It seems that only Denmark invested a lower share of gross national product in residential construction, while the United Kingdom invested only very little more. As these are two countries with much higher gross national products *per capita*, the strain on our resources of our investment in residential construction may be regarded as greater. Nevertheless, in comparison with countries such as Greece, Italy, Portugal and Austria our expenditure on residential construction was not exceptional. Our housing, however, has had a higher level of subsidy and social content, generally resulting from greater intervention of public funds and subsidies financed out of taxation; this may be regarded as imposing a greater economic strain than in, for example, Greece where the bulk of housing is unaided by public funds and is either of a luxury nature or consists of rudimentary dwellings erected in the countryside by the labour of the owners. Greece is an extreme example of a country in which a high volume of housing (much of it of a low standard) is financed by squeezing resources out of personal savings and labour which are not available in the ordinary course for general economic development. The same is true to a varying extent in Austria, Italy and Portugal where public funds and subsidies to housing have been severely restricted in comparison with Ireland. In so far as the public funds invested here in housing could have been used for general economic development and in so far as the taxation necessary to give this housing its high social content impedes economic development, the strain on our economy was greater than is represented by the proportion of gross national produce absorbed by housing.

Table 10 also indicates that residential construction here was a small consumer of construction resources in comparison with other countries. This is partly because the volume of residential construction was small by comparison with other countries but is mainly due to the fact that, as is to be expected in view of the stage of industrialisation reached here, total construction and works formed a high proportion of gross domestic fixed capital formation here as Table 11 indicates.

Table 12 shows how residential construction here in the period 1949-1958 compared with that in other countries as a consumer of investment resources generally. This table taken in conjunction with previous tables indicates that, while residential construction in volume or in value was not exceptionally high, the ratio between

it and gross capital formation may be regarded as unfavourable to general economic growth because of the low level of investment generally.

Public Funds in Housing

Reference has been made to the exceptional extent to which public funds enter into housing investment here. Table 13, which shows this, is reproduced from an E.C.E. study.¹⁰ About three-quarters of capital funds invested in a recent typical year here came from public funds whereas a half or less was the rule in the majority of countries. In the case of Greece, Italy and Portugal only a very small proportion of the capital funds came from public sources, the bulk of the capital in these countries being met from personal funds under the urgency of the need for rehousing. The low proportion of capital investment in housing coming from personal funds in Ireland is indicative of the number of local authority rented houses and the low personal investment required for owner-occupied dwellings.

With the decline in local authority housing here since 1955 and the restriction of public house-purchase loans within an income limit, the proportion of capital housing funds coming from public sources has probably declined from the level of 1955 but is still likely to be greater than in practically any other country except possibly the Netherlands.

Level of Subsidies

In discussing the social aspect of housing, it was shown that the rent level in new local authority houses here is lower and purchase terms for new owner-occupied dwellings more favourable than in the majority of countries. The price to be paid for this social advantage is an economic one involving a high level of subsidy out of public funds. Table 14 shows that if one assesses the subsidised rents in social dwellings in Western European countries as a percentage reduction in the economic rent that might be charged on private long-term credit market terms, the percentage reduction is highest in Ireland after Italy, France and Austria, three countries where, under the influence of post-war inflation, private mortgage rates are the most unfavourable in Western Europe. It should be noted, also, that the share of our dwellings subsidised at this level is from twice to three times what it is in those countries. Not all of the reduction affected in the hypothetical private economic rent causes a loss to public funds, since portion of the reduction is effected by the extension to a currency of 50 years of housing loans to local authorities. Another table in the same study¹¹ assesses the actual loss to public funds in Ireland, in respect of a typical social dwelling, as the third highest when measured as a proportion of the capital cost of the dwelling. Finally, it was estimated in the same study that in 1956 or 1957 the total annual cost per head of population in U.S. dollars of subsidies to housing represented \$5.6

¹⁰ *Financing of Housing in Europe*, op cit.

¹¹ Table 41, *Financing of Housing in Europe*, op. cit.

in Ireland and the United Kingdom, \$5.1 in the Netherlands, \$4.5 in Norway, \$4 in Sweden and \$3 in Belgium.

Scope of public aid to housing

While, in volume, residential construction here in the period 1949-58 was small by comparison with other countries (with greater housing needs), practically all our residential construction received public aid and therefore was an important factor in increasing the level of taxation. Table 15 shows for a recent typical year that Ireland had with Sweden the highest share of output aided while countries like Austria, Greece, Italy and Portugal with economic problems similar to ours had a very much smaller share of output in receipt of aid. The reasons for the differences between the countries in the scope of public aid are also indicated in the table. Ireland, Sweden, the Netherlands and France, the four countries with 90 per cent. or more of output aided have a high maximum floor area for dwellings eligible for aid; the result is that in comparison with, say, Norway and Denmark, virtually all dwellings built are eligible for aid having regard to size. In Norway and Denmark, the lower size-limits effectively exclude from aid persons able to afford a bigger dwelling. Limitation of the amount of aid is also a factor in these countries encouraging non-aided construction. Income limits or cost limits operate in Western Germany and Belgium to limit the application of aid in spite of fairly high maximum floor areas allowed. The fact that in the private sector in Belgium only one-family houses qualify for public aid is an important limitation. In Austria, Spain, Finland, Greece, Italy, Switzerland and Portugal, the amount of public funds made available for housing is limited well below the capacity of building resources. As a result, intending builders build without aid, if their means allow, rather than wait for the public aid. A limitation of the available aid to certain agencies is also common in most of these countries.

Productivity in house-building and house-building costs

The fundamental economic problem of housing is that a modern dwelling costs in Europe at least four times the annual earnings of a fully-employed adult industrial worker. Because of this relationship long term credit must be found and paid for. If the loan charges alone on a dwelling are not to exceed 20 per cent. of the income of a worker, generally regarded as the socially acceptable maximum, they cannot exceed 5 per cent. of the capital cost. If other annual charges in respect of a dwelling are put at 1.5 per cent. of capital cost, the loan charges cannot exceed 3.5 per cent. of the capital cost of a dwelling. Given the situation here where interest alone on long-term housing credit is from $5\frac{3}{4}$ per cent. to 6 per cent., where the general rent level is, because of rent control, considerably less than 20 per cent. of income and where the annual earnings of many persons are below those of a fully employed industrial worker, a reduction in the capital cost of a dwelling is of the highest economic and social importance, not least because public subsidies out of taxation must fill the gap between the actual charges and what tenants can afford.

This problem of reducing the capital cost of a dwelling should properly be regarded as a problem in productivity. In the long run the real economic test of productivity in housebuilding is the ratio between the cost of a dwelling and average wage-earnings. The trend of this ratio compares unfavourably with that of almost all consumer products. A Dublin Corporation dwelling now costs more in terms of a tradesman's wage than before the first World War, and probably still more in other areas where building competition and efficiency have been less. A similar development has occurred in all other countries and the realisation of this trend has in recent years led to intensive research to reduce the capital cost of a dwelling.

The importance of reducing the capital cost of a dwelling cannot be overstated in our circumstances, given the need for increased capital formation to provide permanent productive employment, the heavy weight of taxation necessary to bridge the gap between economic and social rents and the increasing frequency with which housing authorities are faced with the problem of low income families in unfit dwellings who cannot be rehoused even at present rent levels.

There is evidence on many sides that productivity in housebuilding here is low. The pre-war output of one dwelling per man per year has not been repeated since the war on the housing schemes of a large urban authority. Output in 1934-36 was 1.016 dwellings per man per year; this fell to 0.590 in 1946-48 but rose again to 0.892 in the years 1955-57. It is true that the average post-war dwelling has been somewhat larger and of better quality than its pre-war counterpart; the increased post-war use of machinery and mechanical aids, however, would go far to cancel out this factor. Table 16 shows the course of output in local authority housebuilding outside Dublin since 1950. An output in excess of one dwelling per man year was achieved only in 1957-1958 when, however, the completion rate was inflated in relation to the number of men employed by reason of the heavy decline in commencements in that and the previous year.

The best absolute test of productivity is the site man-hours required to erect a dwelling and, in this field, there is a growing volume of international data available. So far as is known statistics under this heading have not been previously collected here. The figures quoted in this paper, therefore, represent the first soundings into site man-hours per dwelling in Ireland as a measurement of productivity in housebuilding.

The figures relate to local authority housing sites in which work was in progress in the years 1957 and 1958. The figures are of man-hours within the curtilage of the house, i.e., site works, foundations and superstructure. Man-hours on general site development are excluded since the amount of development will vary from site to site and no firm basis of comparison can exist.

- I. Scheme of 24 houses of average size 886 sq. ft., including outoffice of 60 sq. ft. Site man-hours per house excluding sub-contract man-hours on roof flashings, plastic floor tiling, electrical installations and front garden railings

and gates=2,516 man-hours including 160 joinery workshop hours.

- II. Scheme of 112 houses of average size 798 sq. ft., including outoffice of 16 sq. ft. Site man-hours per house *excluding* both joinery workshop hours and subcontract hours for fencing and electrical installations=2,288 man-hours.
- III. Scheme of 176 houses of average size 795 sq. ft., including outoffice of 16 sq. ft. Site man-hours per house for same work as II=2,142 man-hours.
- IV. Scheme of 58 houses of average size 800 sq. ft., including outoffice of 16 sq. ft. Site man-hours per house for same work as II and III=2,169 man-hours.
- V. Scheme of 20 houses of average size 874 sq. ft., including outoffice of 50 sq. ft. Site man-hours per house=2,569.

All the foregoing schemes were fully traditional of block, brick or mass concrete with roofs of tiles and timber and full services. Schemes I to IV were in large urban areas and scheme V in a small urban area. Mechanisation on the sites consisted of concrete mixers, small hoists and dumpers and bull dozers or excavators for site grading and excavation.

The average site man-hours per house for these five schemes covering site works, foundations and superstructure of a house of around 850 sq. ft. including outoffice, might be placed in the region of 2,500 man-hours including all sub-contract work.

A total of 2,500 site man-hours for an 850 sq. ft. house is high by comparison with particulars available from other countries. The High Authority of the European Coal and Steel Authority has carried out a carefully controlled project of erecting similar houses in the six member countries with a view to comparing productivity. The conclusion drawn from this exercise was that it should normally be possible to erect in member countries a two-storey one-family house of 1,070 sq. ft. including a cellar, for an expenditure of 1,600 man-hours excluding general site development and heating installation.¹² The houses were fully traditional of block or brick and tiled roofs and with full services including septic tanks in some cases. The conclusion related to a degree of mechanisation on the site comparable with that cited already for the Irish sites.

In Britain, it is estimated that, with the improvement in productivity since the late 1940's, a traditional local authority house of 1,050 sq. ft. including outoffice of 110 sq. ft. is being built in recent years for an expenditure of 2,100-2,200 site man-hours.¹³ A recent publication¹⁴ states that on a large cottage estate built by the London County Council, site man-hours per house fell from 1,724 in 1950 to 1,435 in 1954; the average size of dwellings in

¹²Premier programme de constructions experimentales, CECA, Luxembourg, 1958.

¹³*Government Policies and the Cost of Building*, United Nations, Geneva, 1958, Part I, p. 47.

¹⁴*Public Authority Housing*, A. W. Cleeve Barr, Batsford, London, 1958.

which these figures relate was 860 sq. ft. including built-in storage space.

The Irish figure of 2,500 man-hours is, therefore, about 50 per cent. higher than the continental figure of 1,600 man-hours for a house over 200 sq. ft. larger and from 12 to 16 per cent. higher than a British figure for a house also about 200 sq. ft. larger. The comparison with the London County Council house is more unfavourable still but some allowance must be made for the gains from repetition due to the large series in which that house was built.

Another indication of productivity can be gained from the share of site labour costs in total building cost. An analysis¹⁵ of the break-down of building costs for single-family houses shows that site labour costs for two Irish projects of 39.0 and 33.0 per cent. of total building cost are the second and fourth highest respectively of 11 Western European projects. Site labour costs in the majority of the other projects fall into the range of 25 to 30 per cent. of total building cost.

It appears, therefore, that housing site productivity here is low compared with other countries. If productivity here were increased to the extent that 2,000 man-hours instead of 2,500 were required for a house, which would not seem to be an unreasonable figure having regard to experience elsewhere, the result would be a saving of approximately £100. This is a matter which obviously warrants further inquiry and analysis with a view to testing, on a wider scale, the preliminary results obtained and seeing, if these results are confirmed, what the possibilities of increasing site productivity are. Data are available for man-hours on separate stages of the work for Continental sites and further data are being assembled at various centres. Corresponding inquiries and analysis here on a "stage" basis would help to establish the causes of the low productivity. As an example of the light thrown on the overall position by analysis of individual operations, comparative figures may be cited for electrical installations which were excluded from the site man-hours quoted above for a number of Irish sites. The ESB have estimated that 32 man-hours are required for the installation of 9 lights and 6 power points in a typical one-family house here. In the US the corresponding time taken to instal 10 lights under 16 power units is put at 25 man-hours.¹⁶ This single stage comparison is of a piece with the general picture presented above and shows the merits of rationalising the various operations that go to make a house.

The indications that site-productivity here is low are supported if one compares the level of house-building costs here with the level in England and Wales to which the British productivity figures cited relate. In 1958 the average tender price (including direct labour estimates) for three-bedroom local authority houses

¹⁵ *Government Policies and the Cost of Building*, op. cit. Part I, pp. 44 and 45.

¹⁶ *Cost savings through standardisation, simplification and specialisation in the building industry*, OEEC, 1954.

in England and Wales was £1,488¹⁷. This figure relates to super-structure and site works, i.e., all works within the curtilage of the house for a house of 903 sq. ft. (including out-office). In Ireland, the corresponding figure was £1,367 for a 786 sq. ft. serviced house. The difference of 117 sq. ft. between the average size of house would have reduced the "British price" for our smaller house to £1,342.¹⁸ A further reduction must be made for the lower building wages here, amounting to an estimated £32. The "British price" for our house at our wages would, therefore, have been £1,310. Two other factors must be taken into account, namely, the comparative quality of the dwellings in fittings and equipment and the price of materials here and in England and Wales. The higher average quality¹⁹ of the British house is estimated to reduce the British tender price for our house by about £75. It is difficult to make a satisfactory comparison of the cost of materials here and in England and Wales, as published lists of prices²⁰ are not always on a comparable basis. Cement, plaster and some metal goods are clearly dearer here but in respect of many materials, e.g. timber, glass, paint, bricks, tiles and other metal goods, the differences are small or Irish prices are cheaper. The overall effect might be that the materials for a house cost from 5 to 10 per cent. less in England and Wales than here. This would amount to from £40 to £80 by which the "British price" for an Irish house would need to be increased. The net position then, taking the cost of materials and quality into account, is that the "British price" in 1958 for our smaller and lower quality local authority house at our wages and material prices would be less than the actual price received by from £52 to £92.

These figures are not conclusive and have limited validity. But the possible extent of the difference in cost indicated is sufficiently great to warrant serious consideration particularly when taken in conjunction with the evidence of low site-productivity here.

Evidence of low productivity on housing sites here should not be received in any spirit of facile disparagement of the house-building industry and in particular of the building worker. High productivity of labour under the conditions in which a house must be produced is not easy. The labour is performed in effect in a make-shift factory set up temporarily in a field; there is exposure to the elements; the work is hard and exacting; welfare conditions such as are enjoyed by other industrial workers hardly exist on building sites; employment tends to be intermittent with frequent

¹⁷Report of the Ministry of Housing and Local Government, 1958, HMSO, Table D, Appendix X.

¹⁸Assuming that the extra area cost 25/- per sq. ft. as compared with about 32/- per sq. ft. for the full house.

¹⁹The recommended standard for local authority houses in England and Wales envisages the following items not normally included here:— a second WC for 6 or more persons with a wash hand basin if provided within the house, a well-ventilated and lighted larder with three rows of shelving, covered access to out-offices, laundry facilities including a separate wash-boiler, often a second sink and a wash house, particularly in rural areas, a built-in wardrobe in at least one bedroom, glass wool insulation in the attic and small convector or radiator systems of space heating. Apart from the larder, kitchen storage requirements are higher than what is normal here.

²⁰For example, *The Irish Builder and Engineer* and *The Builder*.

changes of employer and work mate. The existence of conditions which militate against high productivity is, however, the very reason why special efforts should be made to assist the worker achieve better productivity. In this respect, it is evident that by comparison with other countries little use has been made in the building industry here of the scientific aids to increased productivity common elsewhere such as courses in site organisation, work study, special training of foremen, etc. There is no organised building research in progress such as is normal in other countries to develop new building techniques and generally rationalise production methods. Experience in other countries shows that public authorities have an important role to play to ensure that the efficiency of the building industry is increased. Of itself, the industry is never research conscious in the way other industries are; the large number of small firms, their lack of capital, the peculiarly direct competition between firms due to the tender-and-contract system, the relative inelasticity of demand for the products of the industry, and, in the case of housebuilding, the willingness of public authorities everywhere to subsidise heavily the production of houses, all contribute to this. As large consumers and heavy subsidisers of the products of the building industry, apart from the wider implications of an efficient building industry, public authorities elsewhere have felt an obligation to take such measures as were necessary to assist the industry achieve an efficient level of operation.

As an example of the possibilities that exist for improved site productivity and lower housebuilding costs, mention may be made of the trend in Europe generally towards dimensional standardisation of building components and dimensional co-ordination between components. In this century, house-building has been revolutionised by the growth in the off-site manufacture of such components as doors, windows, fireplaces, plaster boards, etc. Formerly the house was built virtually entirely on the site. The arrival on the site of ready-made components has steadily reduced site work to assembly operations. In this respect, housebuilding here compares favourably with other Western European countries.

It is now accepted generally that further economic gains reducing house-building costs are likely to be made by the logical measure of ensuring that the dimensions of all building components are co-ordinated so as to ensure speedy assembly. Many instances of this lack of co-ordination still exist. For example, significant cost savings can be made here if houses are designed dimensionally as a function of the size of concrete blocks so that no cutting of blocks is necessary. The sizes of metal windows produced here, however, are co-ordinated with British brick sizes and not with our block sizes so that they cannot be fitted in to a concrete block wall without cutting blocks. A manufacturer of metal windows has stated that no cost would be involved in changing the size of the windows to fit our block sizes. It is clear that a review of the whole range of building components is necessary to eliminate such lack of co-ordination which can needlessly increase house-building costs. Such reviews are now being undertaken in most Western European countries. Western Germany, for example, has standardised and

severely restricted the number of dimensions to be used in window and door opens in social housing. Another aspect of this dimensional problem is the possibility of reducing costs by reducing the variety of sizes in which building components are produced. For example, a leading joinery firm manufacturing timber windows here has estimated that reducing the number of window opens covered by their present production from 80 to 30 sizes would reduce the cost of timber windows by 10 per cent. The same firm now manufacture stairs solely on order; this product has not yet reached the stage here where it is sold "on catalogue" as are windows and doors. These again are directions in which other Western European countries are now looking for a reduction in house-building costs. Catalogue production of stairs is common in a number of countries. In the long run, reduced housing costs here can be brought about only by adopting a similar approach to our problem.

Conclusions

The conclusions to be drawn from this paper may be summarised as follows:

- (1) We need a relatively small stock of dwellings because of the structure of our population—particularly the small number of married couples.
- (2) The present supply of rooms per person would seem to be reasonably satisfactory particularly having regard to the high proportion of children in our population.
- (3) Our stock of dwellings has a high proportion of old dwellings which creates a big problem of reconstruction or replacement.
- (4) The volume of new residential construction here since the war has not been particularly large owing to the absence of war-damage, to our declining population and to a slow rate of increase in the number of married couples. The rate of residential reconstruction has been particularly high because of our aged dwelling-stock.
- (5) The number of rooms in new dwellings erected here since the war has been large because the demand has been for full-family dwellings and our families are large. Long-term trends, however, indicate a danger of not providing for the needs of small households with consequent under-occupation of large family dwellings. By comparison with other Western European countries, the floor area of local authority dwellings is not particularly big but our private grant-houses seem to be about the largest dwellings in their class in Western Europe.
- (6) The wide difference in size between working-class and better-class dwellings here is unusual in Western Europe but private grant-houses here are tending to be smaller. Minimum space standards for local authority houses here might be critically reviewed by reference to standards prescribed elsewhere while the higher minimum space standards prescribed for private houses might be reduced to the local authority standards.

- (7) The cost to the tenant or owner-occupier of a new dwelling here is lower than in almost any other Western European country particularly when regard is had to the wide scope of public financial aid here. This is related to the general rent level which appears to be particularly low.
- (8) Residential construction here since the war has had a better social content, a wider scope and a higher rate of public subsidy than in most other Western European countries including richer countries. It has been financed from public funds to a greater extent than in any other Western European country.
- (9) While, by European standards, the volume of our residential construction in post-war years was not exceptionally high, it formed a high percentage of a relatively low figure of *total* investment.
- (10) The need to release capital funds for productive investment and the amount of taxation involved in housing subsidies focus attention on dwelling-costs. There is *prima facie* evidence of low site-productivity and high dwelling-costs which warrant further investigations, on the lines of those now being carried out in other Western European countries; such investigations here would accord with the general movement to analyse the structure of costs in Irish industries. There is evident overall lack of building research and measures to improve building productivity. Standardisation of building components and dimensional coordination between components offer some prospect of reducing dwelling-costs.

TABLE 1.—NUMBER OF DWELLINGS PER 1,000 POPULATION

Country	Date	Number of Dwellings
Sweden	31.12.1950	338
Belgium	31.12.1947	337
France	10.5.1954	336
Denmark	1.10.1955	311
Austria	1.6.1951	308
United Kingdom ...	8.4.1951	281
Switzerland	1.12.1950	276
Norway	1.12.1950	271
Portugal	15.12.1950	267
IRELAND	31.3.1959	260
Finland	31.12.1950	248
Italy	4.11.1951	240
Western Germany ...	1955	239
Netherlands	30.6.1956	232
Spain	31.12.1950	220
Greece	31.12.1955	215

Source.—For other countries, the *Annual Bulletin of the Housing and Building Statistics for Europe, 1957*, United Nations, Geneva, 1958.

Notes.—Dwellings refer in principle to permanent dwellings whether occupied or vacant. Dwellings refer to structurally separate dwellings only in all countries except Belgium, Switzerland, Portugal and Ireland where either the household-accommodation concept issued or a concept which is not determined.

Population refers to total population and not only the population living in private families or households.

TABLE 2.—AVERAGE NUMBER OF PERSONS PER ROOM

Country	Date	Number of Persons
Denmark	1.10.1955	0.72
Belgium	13.12.1947	0.74
Switzerland	1.12.1950	0.75
United Kingdom	8.4.1951	0.78
Netherlands	30.6.1956	0.84
Austria	1.6.1951	0.93
Norway	1.12.1950	0.96
Sweden	31.12.1950	0.97
France	10.5.1954	1.01 (a)
Ireland	12.5.1946	1.03 (b)
Western Germany	1955	1.04
Spain	31.12.1950	1.10
Italy	4.11.1951	1.27
Finland	31.12.1950	1.54
Greece	31.12.1955	2.24

Source.—*Annual Bulletin of Housing and Building Statistics*, 1957, United Nations, Geneva, 1958.

Notes.—The figures relate to total population and total rooms whether occupied or not.

(a) Only large family kitchens counted as rooms; if all kitchens were included the number of persons per room would be slightly below 1.00.

(b) The number of rooms in vacant dwellings is assumed to be the same as in occupied dwellings.

TABLE 3.—AVERAGE NUMBER OF ROOMS PER DWELLING AND PERSONS PER HOUSEHOLD.

Country	Year	Average number of rooms per dwelling	Average number of persons per household
Netherlands	1956	5.1	3.6
Switzerland	1950	4.9	2.8
United Kingdom	1951	4.6	3.2
Denmark	1955	4.4	—
Norway	1953	4.3	3.3 (a)
Spain	1950	4.2	—
Ireland	1946	4.1	4.2
Western Germany	1950	4.1	3.0
Belgium	1947	4.0	3.0
France	1954	3.65	3.1
Austria	1951	3.5	3.1
Italy	1951	3.3	4.0
Sweden	1950	3.1	3.4
Finland	1950	2.6	3.6
Greece	1955	2.1	—
Portugal	1950	—	4.1

Sources.—*Annual Bulletin of Housing and Building Statistics for Europe*, 1957, op. cit.; *The European Housing Situation*, U.N., Geneva, 1956.

(a) 1950.

TABLE 4.—AGE OF DWELLING STOCK

Country	Assessment year	Base year	Percentage of dwelling stock built since base year	Percentage of dwelling stock not assessed
Belgium ...	1947	1918	33	1—1·5
	1953	1900	50	—
Denmark ...	1955	1890	69 (a)	12·5
Finland ...	1950	1920	59	5·0
Ireland ...	1959	1926	30	—
	1959	1918	31	—
Netherlands ...	1956	1926	47	—
Sweden ...	1945	1920	39	12·5
Norway ...	1955	1900	80	—

Sources.—*National Statistics and The European Housing Situation*, U.N. Geneva, 1956; *Estimates for Ireland*.

(a) 17·5 per cent. was built in the years 1941–55.

TABLE 5.—PERCENTAGE OF DWELLINGS WITH PIPED WATER INSIDE THE DWELLINGS, AND WITH BATHS

Country	Year	Piped water inside dwelling	Bath
Switzerland ...	1950	90·8	69·1
United Kingdom ...	1951	81·4	62·4 (a)
Netherlands ...	1956	89·6 (b)	26·8
Western Germany ...	1951	79·4 (b)	31·6
Sweden ...	1950	67·0	27·6
Norway ...	1950	65·3 (b)	16·2
Denmark ...	1955	—	39·4
France ...	1954	58·4	10·4
Belgium ...	1947	48·5	8·4
Italy ...	1951	35·9	10·7
Austria ...	1951	34·2	10·6
Spain ...	1950	34·2	9·2
Ireland ...	1946	29·3	15·4
Finland ...	1950	25·2 (b)	43·1
Portugal ...	1950	14·5	7·8

Source.—*Annual Bulletin of Housing and Building Statistics*, 1957, *op. cit.*

(a) Households in Great Britain only. (b) Inside or outside.

TABLE 6.—AVERAGE ANNUAL NUMBER OF NEW DWELLINGS PER 1,000 INHABITANTS ERECTED 1949–1957

Country	Average number	Country	Average number
Western Germany ...	9·3	Austria ...	5·5
Norway ...	8·3	Denmark ...	5·1
Finland ...	7·3	Belgium ...	4·7
Sweden ...	7·2	Ireland ...	3·9
Switzerland ...	6·5	France ...	3·3
Netherlands ...	6·1	Italy ...	3·2
Greece ...	6·1	Spain ...	2·8
United Kingdom ...	5·5	Portugal ...	2·6

Source.—*Annual Bulletin of Housing and Building Statistics for Europe*, U.N., Geneva, 1958.

TABLE 7.—AVERAGE ANNUAL NUMBER OF ROOMS (a) PER 1,000 INHABITANTS COMPLETED 1949-1957

Country	Number	Country	Number
Norway	37	Finland	18
Western Germany	34	Denmark	17
Netherlands	30	Austria	16
Switzerland	28	Greece	14
United Kingdom	27	France	14
Sweden	25	Italy	12
Belgium	23	Spain	12
Ireland	20	Portugal	—

(a) Including kitchen.

TABLE 8.—AVERAGE USEFUL FLOOR AREA (a) OF NEW PUBLICLY AIDED DWELLINGS

Country	Year	Average size of social dwellings m ²	Average size of private aided dwellings m ²	<i>Note.</i> —Social dwellings refer in principle to dwellings comparable to local authority dwellings here. Such a division does not exist, however, in Sweden and Norway where only one class of dwelling is provided. The division does exist in Austria but separate figures are not available.
Austria	1956	55		
France	1956	60	72	
Belgium (b)	1956	61	—	
West Germany	1957	63	70	
Denmark (b)	1958/59	64	74	
Ireland	1958/59	65	97	
Sweden	1956	60—70		
Denmark (c)	1958/59	73	77	
Norway	1958	70.6		
Netherlands	1958	76	85	
Belgium (c)	1956	86	(d)	

Sources.—Official statistics. Some adjustments have been made to provide a comparable basis of measurement.

(a) Total area measured inside external walls including area covered by partition walls. Cellars, out-buildings, uninhabitable attics, garages and corridor spaces excluded.

(b) Flats.

(c) One family houses.

(d) The Belgian authorities state that the average size of grant-aided dwellings (private) in the years 1949-1959 was slightly greater than the Irish average grant dwelling in 1958/59.

TABLE 9.—RENT AS A PERCENTAGE OF EXPENDITURE ON PERSONAL CONSUMPTION

Country	1952	1958	<i>Note.</i> —The figure for imputed rent of owner-occupied dwellings in Ireland is known to be somewhat too low but the amount of understatement would not affect the general picture presented in the table. The series given in brackets is related to a lower figure for total personal consumption expenditure than in the other series.
Belgium	12.15	12.97 (a)	
Sweden	8.04	9.51	
United Kingdom	8.56	9.23	
Norway	6.37 (b)	7.92	
Netherlands ...	6.39	7.61	
Portugal	6.33	6.79 (a)	
Denmark	6.11	6.71	
Greece	5.58	5.90 (a)	
France	3.48	4.80	
Austria	5.14	4.66	
Ireland	4.10 (b)	4.10	
Italy	(4.22)	(4.05)	
	2.27	3.40	

Source.—Ireland : Central Statistics Office ; Other countries : OEEC Statistical Bulletins.

(a) 1957.

(b) 1954

TABLE 10.—INVESTMENT IN RESIDENTIAL CONSTRUCTION AS A PERCENTAGE OF GROSS NATIONAL PRODUCT (a) (A) AND AS A PERCENTAGE OF TOTAL CONSTRUCTION AND WORKS (B) 1949–1958

Countries	A	B
Western Germany ...	(5.5) (b)	—
Sweden	4.97	41
Switzerland	(4.95) (c)	(42) (c)
Norway	(4.95)	35 (d)
Greece	4.48 (e)	48 (e)
Italy	4.27	62
Netherlands	4.24	39
Austria	4.04	38
Belgium	3.90 (e)	47 (e)
France	(3.5) (e)	—
Portugal	3.2 (f)	32 (f)
United Kingdom ...	2.98	44
Ireland	(2.95)	33
Denmark	2.81	38

Sources.—Ireland : OEEC Statistical Bulletins, 1949–52 ; Central Statistics Office, 1953–58. Other Countries : OEEC Statistical Bulletins.

Note.—Capital formation figures for Ireland have been revised back to 1953 by the C.S.O. A revision of earlier figures is not likely to change significantly the comparative position of Ireland in the table.

(a) Current market prices (c) 1949–1956 (e) 1949–1957
(b) 1952–1956 (d) 1954–1958 (f) 1952–1957

TABLE 11.—CONSTRUCTION AND WORKS AS PERCENTAGE OF GROSS DOMESTIC FIXED CAPITAL FORMATION 1949–1958

Country	Percentage
Greece	66 (a)
Portugal	64 (b)
Sweden	63
Ireland	61
Belgium	54 (a)
Austria	51
Netherlands	51
United Kingdom	49
Western Germany	47 (c)
Norway	45 (d)
Italy	33

Source.—OEEC Statistical Bulletins and, in the case of Ireland, Central Statistics Office.

Note.—See note to Table 10 concerning revision of capital formation figures for Ireland.

(a) 1949–1957

(b) 1952–1957

(c) 1950–1958

(d) 1954–1958

TABLE 12.—RESIDENTIAL CONSTRUCTION AS PERCENTAGE OF GROSS DOMESTIC FIXED CAPITAL FORMATION (A) AND GROSS DOMESTIC FIXED CAPITAL FORMATION AS PERCENTAGE OF GROSS NATIONAL PRODUCT (a) (B) 1949–1958

(In percentages)

Country	A	B	Country	A	B
Greece	32 (b)	14 (b)	Italy	21	20
Western Germany	26 (c)	21 (d)	Ireland	20	15
Sweden	26	19	Netherlands	20	21
Belgium	25 (c)	15 (e)	Austria	20	21
Portugal	22 (d)	14 (d)	Norway	18	28
France	21	17	Denmark	16	17
United Kingdom	21	14			

Source.—*Ireland*: OEEC Statistical Bulletins, 1949–52; Central Statistics Office, 1953–1958. *Other Countries*: OEEC Statistical Bulletins.

Note.—See note to Table 10 concerning revision of capital formation figures for Ireland.

(a) Current market prices

(b) 1949–1957

(c) 1952–1956

(d) 1952–1957

(e) 1949–1957

TABLE 13.—SOURCES OF CAPITAL INVESTED IN NEW DWELLINGS IN WESTERN EUROPEAN COUNTRIES, 1955

(As percentage of total capital housing expenditure)

Country	Public funds	Personal funds	Private credit institutions
Ireland	75	10	15
Netherlands	69	31	
United Kingdom	56	44	
Spain	55	45	
Denmark	55	10	35
Norway	50	30-40 (a)	10-20
France	47	53	
Belgium	43	45	
Sweden	36	10	54
Western Germany	27	24	49
Finland	20	80	
Italy	13	52	35
Greece	5	95	
Portugal	3	97	
Switzerland	1	30	69

Source.—*Financing of Housing in Europe*, United Nations, Geneva, 1958. Table 19.

(a) Including short-term loans without mortgage from private credit institutions.

TABLE 14.—SUBSIDISED RENTS IN SOCIAL DWELLINGS IN WESTERN EUROPEAN COUNTRIES AS PERCENTAGE REDUCTION IN PRIVATE ECONOMIC RENT, 1956 OR 1957

Country	Percentage of reduction in private economic rent	Country	Percentage of reduction in private economic rent
Italy	78	Belgium	50
France	76	Western Germany	40
Austria	71	Finland	38
Ireland	67	Denmark	30
Spain	63	Sweden	29
Netherlands	56	United Kingdom	28

Source.—Table 40, *Financing of Housing in Europe*, *op. cit.*

TABLE 15.—DWELLINGS IN RECEIPT OF PUBLIC FINANCIAL AID IN WESTERN EUROPE, 1955-57, AND FACTORS DETERMINING THE NUMBER OF SUCH DWELLINGS.

Country	Aided (a) dwellings as percentage of total output	Limiting factors for public aid	
		Maximum floor area of dwelling. m ²	Other limiting factors
Ireland	97	130	—
Sweden	97	125	—
Netherlands	95	160	—
France	91	170	—
Denmark	85	110	—
Norway	66	100	—
Spain	66	200	Amount of aid limited
Austria	60-70	130	do.
United Kingdom	58	—	No aid to private housing
Belgium	53	130	Costs limits. Only one-
			family houses get
			grants to private
			housing
Western Germany	52 (b)	120	Income limit
Finland	39	—	Amount of aid limited
Greece	27	—	Aid and agencies limited
Italy	21	110 (c)	do.
Switzerland	7	—	do.
Portugal	2	—	do.

Source.—*Financing of Housing in Europe, op. cit.*, Table 38.

(a) Excluding aid solely in a form which does not involve direct disbursement of public funds—e.g., tax concessions, mortgage insurance, etc.

(b) If dwellings aided with tax concessions only which are considerable, were included in the figures for Western Germany, total aided output would amount to 90 to 95 per cent. of the total.

(c) With an addition of 16 m² for each person over seven.

TABLE 16.—COMPLETED LOCAL AUTHORITY DWELLINGS PER MAN-YEAR OUTSIDE DUBLIN CITY, 1950-59

Year ended 31st March	Dwellings completed per man-year	Number of dwellings in progress at 31st March
1950	·450	6,936
1951	·579	7,017
1952	·612	6,668
1953	·775	4,467
1954	·864	3,903
1955	·758	3,552
1956	·645	3,972
1957	·871	2,714
1958	1·149	1,614
1959	·690	1,720

Source.—Department of Local Government.

DISCUSSION

Mr. G. A. Meagher, in seconding the vote of thanks, said : International comparison in matters of this kind are unquestionably valuable and stimulate fresh thinking on housing and on the means of applying the experience of other countries. Mr. Ó hUiginn deserves our thanks for his comprehensive paper.

There are, of course, obvious limitations on what can be imported in the way of housing policies from other countries with different traditions and different financial structures from those obtaining in one's own country. Housing in this country has been a native development. It has gone through a variety of changes of emphasis. In the early years of the century, the shift from a purely negative housing policy to a virile programme for rehousing agricultural labourers had no parallel in Britain. In the 1930's, the financial principles of the agricultural labourers programme were made the basis of the urban slum clearance programme. After the War, in contrast to British policy, private enterprise housing for owner occupation by middle income groups was widely encouraged. In recent years with the near completion of the new building programme the emphasis has shifted to the modernisation and improvement of our stock of older houses.

As may be deduced from Mr. Ó hUiginn's paper, the Irish housing position is good particularly in the supply of separate dwelling units of reasonable floor space for lower and middle income groups. The greatest single factor in bringing about this situation has been the widespread availability of long term credit in association with subsidies.

It is possible from the paper to note certain features of our housing policy. Some of these deserve greater emphasis. Irish housing has a comparatively high social content. This has been ensured by the extent of public participation in housing. The result has been an adequate and regular supply of long-term credit which has been channelled towards objectives which housing policy considers desirable. Social objectives are not attainable solely by the provision of capital. In some European countries housing capital has not been within the reach of lower income families because of its cost and because the public financial assistance given has not reduced the rents or loan charges sufficiently.

In Ireland local authorities' renting policies have ensured that subsidies from public funds for post-war dwellings have been diverted to those who need them most. In the year 1957-58, 72 per cent. of the rental income from dwellings let for the first time since 1949 derived from dwellings let on differential or graded rented system based on the tenants' capacity to pay.

Mr. Ó hUiginn concludes that the cost to the tenant of a new dwelling is lower here than in almost any other European country. This statement needs considerable qualification. The rents including rates of most local authority dwellings are not low in this country compared with, for example, the Six Counties or Scotland, areas which have much in common with our conditions. The inclusive figures for post-war four apartment houses are as follows for the principal cities :

Year 1955 : Edinburgh £58, Glasgow £52, Belfast £57, Dublin (differential rent schemes) £52.

In reading these figures, one must bear in mind the relative levels of household earnings.

The policy followed in this country in favour of relatively small down-payments for house purchase, has enabled large numbers of newly-weds of extremely modest capital to provide their own housing accommodation. This is clearly the right social policy in our circumstances. In Britain, the White Paper issued in 1958 announced that arrangements were being made to abolish down-payments by enabling the local authorities to make loans for house purchase up to 100 per cent. The White Paper announced also that Exchequer loans would be made available to Building Societies so as to enable them to make advances up to 95 per cent. for the purchase of older dwellings. One of our principal problems here is that private housing is a major claimant on State capital. This capital is channelled to house purchasers via the local authorities. In Britain the local authorities do comparatively little private house financing. The figures for 1955 were £394 millions advanced by building societies and £53 millions advanced by local authorities. The solution in Ireland might well be a closer association between the commercial banks or insurance companies and the building societies.

It is difficult to draw firm conclusions from the available statistics of man-hours per dwelling. A recent E.C.E. report on Housing Costs notes that in quantitative terms of man-hours on site, there appears to be a considerable range between the worst and the best site, at least in those countries where this range was measured. In the United Kingdom figures it was discovered that the range in variation between the best and the worst site was extremely high, of the order of 1 to 3. The E.C.E. Report concludes that average or typical figures of man-hours on site should therefore be treated with great caution unless the basis on which they have been established is clearly known.

Experience shows that there is no one remedy which is effective in reducing or keeping down housing costs. Solutions must be found along different lines. The standard methods adopted are mainly as follows :

1. Economy in the accommodation and equipment of houses.
2. Building more terraced houses.
3. Building in fairly large contracts.
4. Building by labour contract and direct labour.
5. Close control on approval to tender prices.
6. Bonus incentive schemes.
7. Better organisation of building sites.
8. Standardisation of building components and dimensional co-ordination.

It is perhaps in relation to the last two items, especially building organisation, that the Irish Building Industry and associated professional bodies have most to gain from international studies.

Mr. P. Callinan, F.R.I.C.S., said: Quoting a stock of dwellings at 260 per 1,000 inhabitants set out in Table 1 of the paper can easily be misinterpreted and for proof of this it may be pointed out that 700,000 or roughly half the increase of the population of England and Wales since 1951 have come to S. E. England, one third of it within 40 miles of Charing Cross, London. About 40 per cent. of the new jobs created in that time are in the London region. While the central part of the London area is losing 10,000 inhabitants a year, dispersal of population does not mean dispersal of employment and hence demand for new housing.

What the future of population in this country is likely to be is to some extent anybody's guess but it is certain that even if the population of the country decreases still further, that of the Dublin region (in which might be included part of Kildare and Wicklow) will increase and also that of Cork city region and others of the larger urban centres. It is certain that the rural population will decline still further, including that of many small towns and villages.

Apart from demands resulting from migration, families are likely to be smaller and the demand for family units to increase.

Mr. Ó hUiginn says that a dwelling built before 1860 must be regarded as obsolescent. My own professional experience suggests that anything before 1881 when bye-laws became operative comes into that category, as before the advent of building bye-laws (following the Public Health Act of 1878) little attempt was made to deal with rising dampness in walls and under the building. In fact I would go so far as to say that 380-400,000 dwellings aged 60 years and more should be replaced within the next 30 years.

Much of the reconstruction grants paid out have in my view not secured the best value for money, in some instances the money has been wasted.

Norway has been referred to in the paper. It happens to be a country I know well. It is of particular interest to Ireland as in the early 1880's it had an emigration rate nearly as high as Ireland at that period. Now its problem is migration from country to town and scientists appear to be the only emigrants going overseas. The policy of providing two houses per farm has ceased and the farmer-fisherman has disappeared more completely than he has in say West Cork. The population of Norway has increased from roughly 2 million in 1880 to 3½ million at the present time, and is still increasing despite small families. A Norwegian Journalist writing in 1952 says "I have strolled round the poor quarters of Paris and seen the interminable gloom of London's East End but have never seen a more harassing picture than the tragedy in Dublin slums. Dublin is Europe's shame."

I cannot accept *Mr. Ó hUiginn's* figures as to the cost of materials here compared with that of Great Britain. It is higher here for almost every item. I agree that the problem of reducing capital costs of a dwelling should properly be regarded as a problem of productivity. As *Mr. Ó hUiginn* points out a Dublin dwelling now costs more in terms of craftsman's wages than before World War I and on the evidence of *Mr. Taylor* productivity in building is lower than before World War II.

Every Architect and Quantity Surveyor will agree that by ensuring dimensions of components are co-ordinated labour can be saved, but the particular instance of metal windows is not a case in point. Moreover the makers of windows in the Republic cater for trade outside the country.

I believe that the problem of productivity is wrapped up largely with better education at all levels in the building industry. We have heard much recently about the importance of higher education. Amazing as it may sound nothing has been done here in a worthwhile sense for building, although a beginning has been made at the Bolton Street School of Technology by instituting a 4 years full time course. The country has a long way to go to catch up with the Schools of Technology in Great Britain and the Continent, particularly the Manchester School of Science and Technology.

Whatever deficiencies the building industry may have the builders are by no means the only culprits. Housing is more than the provision of shelter. I am speaking to members of the Institute of Public Administration as well as to the Statistical and Social Inquiry Society and I am putting out my neck, so to speak, when I condemn the present arrangements for the management of municipal housing property. So far as I am aware there is not one professionally trained housing director in the Republic while in Great Britain and in the Netherlands there is hardly an urban community of 50,000 without one. Apart from professionally qualified housing directors, I am not aware of any of the young women who obtained the certificate for routine housing management securing employment here although work was given them in Northern Ireland—in fact I know of one instance where a Dubliner was invited to apply and was appointed to fill a post there.

The Housing Director should be responsible for the selection of suitable sites and for the negotiations leading to their acquisition. For this professionally qualified valuers should be employed and the director should be so qualified. Outside Dublin the standard of maintenance of many municipal estates is deplorably low and the standard of construction, as Deputy O'Malley has pointed out in the Dáil is often unsatisfactory. In private estates the operations of the Rent Acts have in effect shortened the period of useful life of houses and in turn produced a demand for more municipal houses. If a local authority has not an official architect to supervise maintenance work, one of the County Engineer's staff should be qualified as a building surveyor—the usual practice in England is for one of the engineer's staff to obtain this additional professional qualification.

On the question of site selection, if it is decided to keep the proposed block of flats to a height of say five storeys and if the site is a potentially valuable centre area site, another site should be secured for the five storey block.

Mr. D. O Loinsigh said : Mr. Ó hUiginn has given us a great mass of information and material and it is not easy to assess our relative position in housing from it. However, the broad picture emerging is that we are ahead of other relatively poor countries. I think we can take it also that we compare well with more advanced

countries bearing in mind that, as Mr. Ó hUiginn has pointed out, many of them are anything from 50 to 100 per cent. wealthier than we are.

We have to remember, too, our peculiar position arising from our static or declining population. On the population aspect it is relevant that a high rate of vacancies has been experienced in a number of our local authority housing estates in recent years. In Dublin the net number of vacancies in the Corporation's housing estates has been running at a rate of 1,500 a year. Should this rate continue, it would seem that the balance of the Corporation's housing needs could be met in about 5 years with little or no new building. I think, however, that some other local authorities have had a rather different experience to Dublin. In Cork, for example, the net vacancy rate has been small and there has been no great variation in it. This is an aspect which may need further probing in view of its relation to housing plans for the future.

Our differential rents system has been mentioned. Differential or graded rents apply to new local authority lettings but not generally to the older dwellings. Something like 70 per cent. of all our local authority dwellings are still let at fixed rents. Many of these rents throughout the country are little more than nominal and very often do not cover even the cost of repairs. Further, of 40,000 or so tenants in Dublin, only an insignificant number pay the maximum differential rent. That maximum differential rent in turn generally falls short of the full economic rent. Thousands of tenants are paying far less than they might reasonably be expected to pay. The ever thickening forest of T.V. aerials on the skyline over the Corporation's housing estates is eloquent of this. There is certainly a case for the application of differential rents to all local authority lettings. There is also a case for bringing maximum differential rents into line with the true economic rent.

The paper brings out at various points the very high level of subsidisation of housing in Ireland. It is well that this should be made clear. In the matter of the charge on the public purse we have surpassed not alone countries of similar resources but also much richer countries. Our public capital investment in housing over the last 10 years has totalled the very large sum of £136 million. This makes an average of nearly £14 million a year. The figure of £14 million may be compared with a net average investment of new capital in industry of £7 or £8 million a year. With the fulfilment of housing needs the level of new public investment has, of course, dropped in the last few years. We may expect requirements for local authority housing to taper off further. There has, however, been a marked revival of late in the demand for grants for private houses—both for new houses and for the improvement of existing houses.

Apart altogether from the level of new investment we continue to pay for the high level of past investment. Interest and sinking fund charges on past Exchequer borrowing to provide grants for private houses are about £1 million a year. Total interest and sinking fund charges on local authority housing are as much as £5½ million a year. Of the £5½ million the tenants contribute not more than 25 per cent., leaving over £4 million to be borne by the

taxpayers and ratepayers. The Dublin housing rate is now 5/- in the £ or one-eighth of the full municipal rate. Likewise, Exchequer contributions to loan charges on local authority housing represent about one-eighth of the debt service charges borne by taxation. The burden is continuing to grow.

We are, therefore, paying a heavy price for our progress in housing. We would pay this price willingly if necessary on social grounds, but it is questionable whether the price need be so heavy when regard is had to the very low rents that numerous reasonably well off local authority tenants are paying. Mr. Ó hUiginn's paper indicates that our rental levels are almost unique in their lowness.

Mr. Ó hUiginn: I wish to thank the speakers for their kind remarks about my paper and to deal briefly with some of the points made.

The studies quoted from which my conclusions in relation to the comparative level of housing subsidies here and the consequent rent level were drawn relate to national schemes of housing subsidy. The rent figures quoted by Mr. Meagher for Belfast and Scottish cities reflect the specially heavy schemes of subsidy in those areas additional to the general United Kingdom scheme. This was, however, changed in Scotland in 1957 when the subsidies were heavily reduced. It may be mentioned, also, that statutory action was taken against Glasgow Corporation in 1958 to require them to review rents in the light of incomes and building cost.

I share Mr. Meagher's caution about site man-hours figures. The cumulative picture, however, which emerges from the different soundings I have made into labour costs and productivity is not reassuring to say the least of it.

Figures of the national stock of dwellings per 1,000 inhabitants indicate the general standard of housing reached at a particular time particularly if related to the structure of the population. They also, enable progress over a period to be assessed. Establishment of housing needs would require, as I have suggested, examination of household composition and the number of separate dwellings. But, as Mr. Callinan points out, all analyses of housing needs should be made on a regional or area basis because of differences between areas in the trends and situation.

The problem of determining obsolescence raised by Mr. Callinan is a difficult one since so many factors are involved. It would be worth considering, however, collecting information on the age of dwellings being demolished by local authorities with a view to establishing a possible index of obsolescence by reference to age under conditions here.

Generally I hope the paper will be received as a contribution to the understanding of some aspects of housing here which deserve further examination and, if need be, some action which could have beneficial social and economic results.