

# Markets and the Structure of the Housebuilding Industry: An International Perspective

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[Paper first received, November 2002; in final form, December 2002]

**Summary.** This paper sets out to examine why the modern housebuilding industry is organised in the ways it is and to identify some implications for the wider operation of housing markets. It concentrates on advanced economies and the impacts of market conditions, regulatory constraints, production characteristics, institutional structures and land supply. Widespread differences occur across countries in the ways in which housebuilding is institutionally structured. It is argued that these differences are generally explicable in economic terms and that regulatory practices determine much of the variation.

## Introduction

This paper sets out to examine why the modern housebuilding industry is organised in the ways it is and to identify some implications for the wider operation of housing markets. It concentrates on advanced economies and the impacts of market conditions, regulatory constraints, production characteristics, institutional structures and land supply.

At first sight, the discussion seems simple and straightforward. Housebuilding is characterised by the existence of a large number of relatively small firms. They also use production techniques that are labour-intensive and change relatively slowly. They also are 'flexible' in order to be able to adapt to potentially large variations in output. Generally, as a result, scale economies are low, which helps both to make entry and exit from the industry relatively easy and to explain the small average firm size.

Housing supply, consequently, seems to fit

neatly into the standard economics lexicon as a competitive industry. The well-known results for a competitive industry from the structure–conduct–performance paradigm would, therefore, seem to be reasonable hypotheses to apply to housebuilding: namely, that long-run risk-adjusted returns are low and that housebuilding costs closely reflect the marginal costs of inputs. In a dynamic framework, there is a cyclical effect with supply constraints pushing up builders' margins and their input costs in housing market booms and depressing them in slumps. Yet, these temporary variations should be limited, given the ease of entry and exit. These conclusions make life easy for housing market modelling, as the supply side can be dealt with simply by reference to input cost indices and a cyclical mark-up to reflect changes in builders' profits.

Several characteristics of real-world

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housebuilding, nevertheless, seem to be at variance with the simple competitive model. First, housebuilding takes on a number of different institutional forms across and within countries. There is remarkably little international information, or data, on the nature of housebuilding industries in the oceans of housing-related international information, but sufficient exists to know that housebuilding industrial structures vary quite considerably. Secondly, firms adopt strategies and, from experience, know that they are important in determining profit outcomes. Further features could be elaborated, but these two are sufficient to highlight the puzzle. Namely, how are these characteristics possible, if the simple competitive market model is correct? With competition, there should be strong pressures to create similar types of firms rather than the observed international diversity. Furthermore, strategic behaviour can have no effect on market outcomes in the purely competitive model (Martin, 1994).

The competitive model, none the less, would predict some industry differences. As housebuilding techniques are widely known, it would suggest that housebuilding industries vary primarily due to differences in relative input prices between countries. For example, high-wage countries should adopt less labour intensive techniques and, so, have production processes reflecting that fact—with, for example, a greater use of off-site fabrication and on-site equipment. Such choice-of-technique influences help to determine the character of housebuilding industries between countries. For example, high-wage, timber-rich North America and Scandinavia have housebuilding industries relying on large-scale suppliers of pre-manufactured timber-frame systems and extensively use pre-assembled modules of internal house fittings. In contrast, high-wage but timber-poor, the Netherlands and France more commonly adopted concrete panel off-site fabrication for house structures. Such differences affect labour skills mixes, amongst other things, but they do not negate the general hypothesis of small, flexible building firms with no strategic options, so

they cannot be the full answer to the competitive puzzle. Housebuilding market contexts, prevailing technologies, input costs and input availability need to be explored in greater depth.

### **Housing Output Variations**

Housebuilding is well known as a cyclical industry with variations in output and prices driven by cycles in the housing market as a whole. Such volatility is typical of a consumer durable or investment goods industry where the existing stock of a good is far greater than current output of it. New housing represents only a relatively small percentage of all the houses bought and sold in mature housing markets. In the UK, for example, new building averages only around 15 per cent a year of total owner-occupied house sales. With such low ratios of new output to the existing stock, changes in overall housing demand tend to induce large variations in the demand for newly built housing. This is because new building is the prime source of extra housing to accommodate any increases in overall housing demand. It takes a long time, moreover, to build sufficient houses to satisfy demand increases, so that when demand grows, prices rise in response to shortages and overshoot their long-run equilibrium levels as households try to find homes before supply has caught up.

Housing market cycles are an inevitable consequence, therefore, of housing supply mechanisms (Ball and Morrison, 2000). The extent to which volatility occurs more in prices or in levels of housebuilding depends on the extent to which extra housing can be supplied when prices rise and the speed of that response.

One reason why house prices fluctuate more than the prices of many other durable goods arises from the structure of housing markets. In industries like cars and domestic appliances, which also face similar 'stock-adjustment' demand characteristics, economies of scale in production tend to generate oligopolistic industrial structures. These enable firms to hold prices relatively steady

during downturns in demand. They prefer to accept the resultant possibly greater fluctuations in volumes in order to sustain the margins necessary to finance their large amounts of fixed capital. Such strategies are not realistic in housebuilding, because of the ease of entry and exit and the competition in the housing market from existing housing owners. This means that, in downturns, there are always large numbers of suppliers prepared to cut prices for a quick sale when financial pressures dictate.

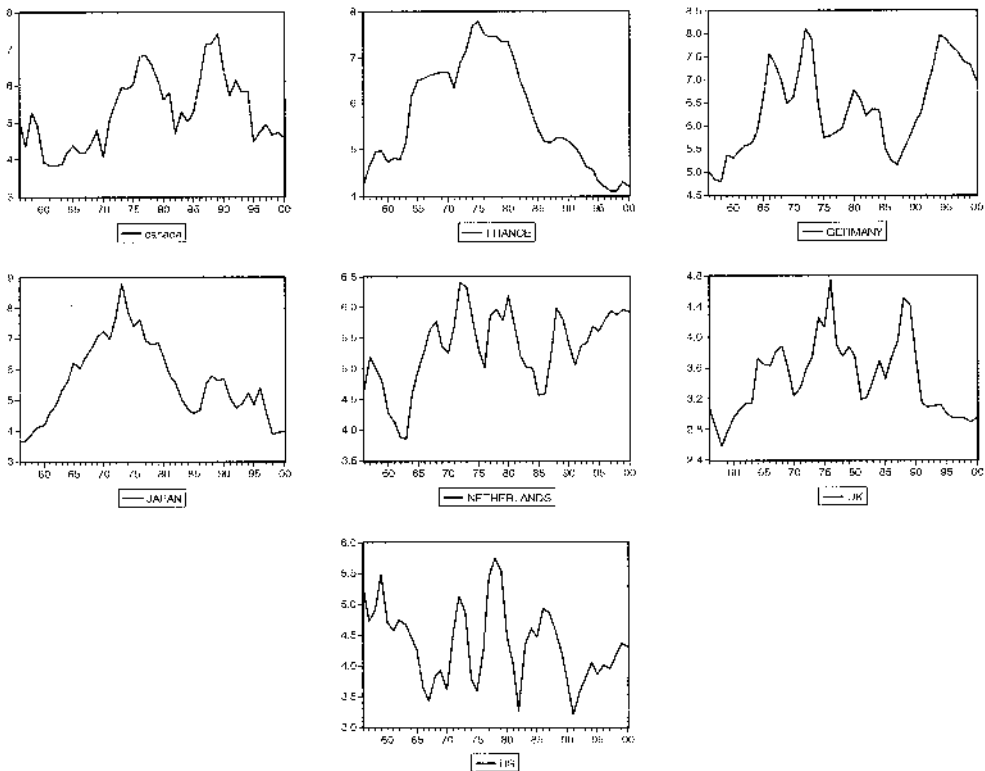
This pricing characteristic of housebuilding is ignored by those who, over the decades, have argued that housing production should become far more capital-intensive, like a 'real' consumer goods industry. Unless supported by huge public subsidies, housebuilding firms that attempt to become highly capital-intensive in their production methods almost certainly go bust during the next major downturn. Despite this characteristic of housebuilding, huge experiments in manipulating housebuilding demand to smooth output fluctuations were undertaken in a number of European countries from the 1950s to the 1970s by taking advantage of social housebuilding programmes (Donnison, 1967; Barlow and Duncan, 1994; Harloe, 1995). Large housebuilders emerged and governments tried to create the market conditions that would enable them to reap cost savings through scale economies and innovation. Unfortunately, few of the scale economies in production materialised and most of the large housebuilders that grew up disappeared as soon as public funding ceased, as did the innovatory building systems they sometimes used (Ball, 1988; Glendinning and Muthesius, 1994; Gann, 1996).

Some causes of changes in housing demand are short-term, business-cycle-related factors, like rising incomes and interest rates. So, unsurprisingly, housebuilding tends to fluctuate in line with the business cycle; with the degree of output and price variation being greater than that for the rest of the economy on average, because of the stock adjustment characteristics of new housing demand, dis-

cussed above. However, there are several key demand features which have longer impacts. They include variations in household numbers generated by population and social changes; migration into prosperous regions; technologies of living (the tram/streetcar, the bus and the motor car being the most historically notable ones); previous shortages caused by catastrophic events like war; and public policy towards such matters as subsidies and tax-breaks for particular types of housing. These when combined together tend to create housebuilding 'long' cycles that are superimposed on the business cycle. Many of these longer-term factors are extended lag responses to specific demographic, technological or policy 'shock' events, which makes it difficult to generalise about housebuilding long cycles, though many have tried. They tend, however, to be important influences on the structure of contemporary housebuilding industries through their effects on the overall level and type of housing demand.

The short and long cyclical behaviour just described can be seen in the graphs in Figure 1 of the share of housing investment in national income from 1956 to 2000 for seven advanced countries: Canada, France, Germany, Japan, the Netherlands, the UK and the US. The impact of the business cycle can be seen in all the country data, although it is more marked in some countries than others. It shows up because of the way housebuilding varies disproportionately with changes in housing demand, encouraging the rises as a share of national income during business cycle upswings and falls during downturns. At the same time, however, long-cycle behaviour can also be seen.

Figure 1 also shows that housebuilding varies in importance between countries over very long periods of time. This characteristic is summarised in the data provided in Table 1, where countries are ranked by the long-term significance of housebuilding as a share of GDP. The country with the most housebuilding over the past half a century has been Germany, followed quite closely by France, Japan, the Netherlands and Canada. The US



**Figure 1.** Fixed residential investment as a share of GDP, 1956–2000. *Source:* OECD, INSEE.

trails almost 2 per cent behind Germany and the lowest, the UK, is behind by almost 3 per cent. These differences can be explained by several factors. Germany is at the highest rank because of the housing boom during the period after reunification in the 1990s. The US provides no subsidised low-income housing, unlike the European countries listed, which probably accounts for most of the difference between it and them. The UK is exceptional, probably because of its restricted land supply in growth regions and a correspondingly high propensity to repair and upgrade existing dwellings.

Once these differences are taken account of, a crude estimate of the typical share of housing investment in the annual national income of an advanced economy with moderately expanding household numbers would seem to be around 4–5 per cent, with the extra percentage point depending on the social attitude to the housing conditions of

lower-income groups. It has been argued that housing investment declines as a share of national income as national income rises above a certain per capita level, but the long-cycle characteristics of these data make it hard to isolate any such effect (Malpezzi, 1990).

Table 1 also suggests that there are maximum amounts of housing investment that a well-functioning economy can cope with. It shows that housing investment shares have never risen above 7–8 per cent of GDP for the countries listed, even when there were chronic shortages. This is unsurprising as such percentage figures imply a huge allocation of a country's existing resources into housebuilding. Not only does this deny those resources to other activities, but it also necessitates substantial knock-on investments in building materials industries, the training of skilled labour and urban infrastructure. When the housing boom is over,

**Table 1.** Housing investment as a share of national income, 1956–2000: cross-country comparisons

	Mean	Maximum	Minimum	Standard deviation	Standard deviation/Mean
Germany	6.4	8.1	4.8	0.9	0.15
France	5.7	7.8	4.1	1.2	0.20
Japan	5.6	8.8	3.6	1.3	0.23
Netherlands	5.3	6.4	3.9	0.6	0.12
Canada	5.3	7.4	3.8	1.0	0.19
USA	4.4	5.7	3.2	0.6	0.14
UK	3.5	4.7	2.6	0.5	0.14

*Source:* OECD.

furthermore, all those resources have to be redirected elsewhere again, which can generate substantial re-adjustment costs—as Germany has experienced in recent years. These factors highlight the difficulties of expanding housing supply rapidly to meet sharp increases in demand.

The degree of volatility in housing investment GDP shares can be measured by looking at the standard deviations of annual residential investment shares in national income, as shown in Table 1, as well as through visual inspection of the graphs of Figure 1. Typically, housing investment fluctuates annually by around 0.5–1 per cent of GDP, with the countries with the largest shares of housing investment in national income, not surprisingly, experiencing the largest absolute fluctuations in those shares. When weighted by their respective means, however, the standard deviations across countries are quite similar.

Housebuilding fluctuations may vary markedly over time, but overall housebuilding fluctuations are not atypically large when compared with other capital goods industries, which experience significant output fluctuations as well (Ball, 1996). What is also interesting is that the cycles of housing investment in each country in the past have tended not to coincide (Ball and Wood, 1999). In some industries, such as automobiles, international differences in macroeconomic cycles have encouraged firms to globalise. This has not occurred in housebuilding; presumably, because low scale economies and the importance of local infor-

mation on construction, land and housing markets militate against it.

Long-run housing investment data, in addition, help to identify the fact that housebuilding has been of declining relative economic importance since the 1980s in Canada, France, Japan and the UK and, since the mid 1990s, in Germany. Only the Netherlands and the US saw sustained expansion throughout the 1990s, fuelled by their respective economic booms and household growth at the time.

House prices, as well as output levels, exhibit marked cyclical patterns, as can be seen in data on annual real house price changes for France, the UK and the US from 1985 to 2000, shown in Figure 2. All three countries experienced several years of falling real house prices in the early 1990s, following buoyant, or even bubble, price rises in the second half of the 1980s. House prices were again on the rise in the late 1990s. Even greater variations occurred in regions of these countries, and housebuilding tends to be a regional business. Housebuilders, consequently, face uncertain future prices for their products.

What do these general market data imply for housebuilders? First, they highlight that housing supply is a risky business. Production and land purchase decisions have to be made on the basis of forecasts of highly uncertain prospects. Secondly, it is also extremely difficult to forecast how long market upswings last and the extent to which they are dampened or exacerbated by business cycle effects. Who, for example, would have



**Figure 2.** Real house price changes in France, the UK and the US, 1985–2000. *Sources:* France: Ministère de l'Équipement; UK: Council of Mortgage Lenders; USA: Fedstats.

predicted in the mid 1990s that housing markets in many countries in the early 2000s would help to offset recessionary tendencies in other economic sectors? Thirdly, extensive econometric research shows that price behaviour in the housing market may be irrational in the sense that forecasts of future market performance are based on recent experience—i.e. adaptive expectations (Dipasquale and Wheaton, 1994; Muellbauer and Murphy, 1997; Meen, 2001). This may help to explain why the ending of the upswing phases of market cycles tends to come as a shock event, which radically alters subsequent behaviour and housebuilder performance.

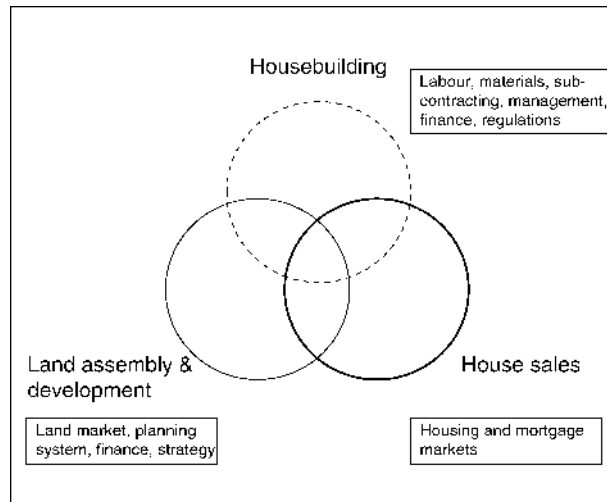
The consequences for homebuilders of this type of market structure are significant. Most importantly, substantial market risk has to be taken account of in the organisation of production. Furthermore, housing market cycles can be the opportunity for spectacular profit-making, but equally spectacular loss-making during downswings. This gives the industry some of the rhythms that Schumpeter suggested occur in industries over the course of the business cycle: organic expansion and optimism during upswings and substantial

industrial restructuring during downswings (Maddison, 1992).

### Functional Organisation of the House-building Process

There are three prime functional aspects of housing development:

- (1) *Residential land development.* Land has to be acquired, the appropriate regulatory permissions sought and the site prepared with infrastructure so that homes can be built on individual serviced plots. With redevelopment sites, this may require the demolition of an existing structure or wholesale land reclamation.
- (2) *Housing production.* This entails the actual building of dwellings—from substructure to completed and fitted-out superstructure.
- (3) *House marketing and sales.* Completed housing is transferred to ultimate users, either through sales to individual homeowners or via some type of landlord. This process involves sales in various types of owner-occupied market (for example, speculative, pre-sales or one-off



**Figure 3.** Overlapping functions in housing development.

contracts with owner ‘builders’) or in rental markets (e.g. sales to private landlords of single or multifamily units or contracts with social housing agencies). Sales, thus, can be made either before or after houses are actually built, as contracts or ‘speculative’ sales respectively.

Figure 3 illustrates these three functions and their interrelationships. Next to each function in the diagram is a box highlighting the relations to other agencies and markets. A Venn diagram is used in Figure 3, rather than a sequential series of boxes, to highlight the fact that the three housing development functions are interrelated and may be institutionally combined in different ways.

Speculative housebuilding of single-family dwellings for home-owners clearly demarcates the process sequentially from land assembly through to sales. Even there, though, homebuilders are keen on pre-sales before starting to build. In social housebuilding, land assembly, project conception and finance have traditionally been initiated by social housing agencies themselves. In which case, land assembly and house ‘sales’ take place at the time of project approval and actual building subsequently takes place when contracts are let to private building contractors. Large-scale private landlords might adopt a similar procurement strategy

to social landlords. In both the large social and private landlord cases, development companies could also approach landlords with projects they wish to build on land they have already assembled, or offer off-the-peg standardised building designs completed at a fixed price for construction on sites already prepared by the landlord.

There are also differences between the organisation of the overall housing development process in relation to single-family and multifamily housing. Multifamily structures are generally more complex and capital-intensive than single-family ones, because of the greater need for load-bearing walls plus common access and other facilities. Multifamily structures are also more likely to be heterogeneous single or grouped structures on greenfield or redevelopment sites, rather than the simple repetitive built forms common with single-family dwelling, suburban expansion. This tends to mean that the developers of multifamily dwellings have to be larger to gain access to capital. They also have to be more focused on design and construction matters than in the single-family case, where repeat designs and simple construction formats are more common.

Such descriptions are inevitably generalisations, because the possible combinations of the three functions and their relationships to other interlinked markets are manifold and

there is little point in describing them all in detail here. Several features, nonetheless, are common in descriptions of them

- a network of interrelationships is described;
- the physical characteristics of the overall housing development process are significant influences on housebuilding organisational relationships;
- economic and financial factors play an important role in determining organisational structures; and
- public policy with regard to housing tenures, land markets and building processes have significant effects on institutional housebuilding arrangements.

The overriding point is to show that different ways of organising the housing development process are associated with distinct housing outcomes. It is consequently dangerous to assume that each type of housebuilding exhibits similar behavioural characteristics and necessarily falls under the rubric of a competitive market. One way of exploring these varying approaches to housebuilding is to categorise each of them as an institutional structure of housing provision. An institutional structure of housing provision specifies the organisations associated with a way of creating housing and the rules and constraints influencing behavioural relations between them. In this way, the functions of agencies in the production process can be mapped out for each type of housing development (Ball, 1998). This has the benefit of recognising that any agency or firm in housing development is involved in a network of interrelationships and enables a mapping-out of the constraints and influences on individual agency behaviour. Specific theories are still needed, none the less, to understand what institutional arrangements are important and why they exist.

### **Housing Production Influences on Institutional Structures of Housing Provision**

A useful starting-point when examining housebuilding institutional structures is the

functional distinction between land development and actual housebuilding, because both require particular types of management and finance. One of the most important factors relating to production is the employment relationship.

Housebuilding involves a construction process and so requires a specific range of construction-related labour competences. Building involves a planned sequence of activities by a workforce of varying skill levels, that utilise specific pieces of equipment. As a production activity, it generates significant information asymmetries between those undertaking building work and those managing them. It is expensive to monitor individual work activities directly on a housebuilding site and machines do not set the pace, so that managers do not have full control over work effort and quality. However, most tasks in housebuilding are amenable to being broken down into specific, priced jobs and can be let out to sub-contractors and other specialists (Ball, 1996).

Sub-contracting resolves several information asymmetry problems, because managers only have to check that work has been done properly and on time and, then, pay out the agreed sum, rather than have to monitor work effort continuously. Sub-contracting encourages standardisation of work tasks and simple, easily repeatable, dwelling designs, so that tasks can be broken down into uniform sub-contracts and assessed more easily. Housebuilders can impose financial penalties on non-performing sub-contractors and build up long-term relationships with core sub-contractors to ensure that they self-police their quality and prices. These sorts of sub-contracting relationship, and their benefits, have become famous since the discovery of 'Japanese' manufacturing methods in North America and Europe in the 1980s (Ricketts, 1994; Kay, 1996). Yet, similar ones have existed since, at least, the 19th century in many countries' housebuilding industries (Price, 1980). Sub-contractors themselves often hire part of their workforces on time, price and task-specific bases—whilst, at the



same time, employing a core of competent skilled workers and supervisors. So, a hierarchical tree of work patterns—embodying market and non-market relationships—can frequently be observed in housing production.

Another common employment option for housebuilders is to hire workers on a temporary hourly or daily basis. In this situation, the problem of directly monitoring work effort arises again. This again encourages the use of standardisation and simple techniques of production with easily observed results, so that relatively unskilled workers can be hired—and fired if they do not keep up with normal work rates. Sub-contracting and day-working considerably aid the flexibility of the housebuilding industry in coping with uncertain demand. When housebuilders' output falls, they do not have to lay-off workers, but instead merely issue fewer contracts or hire fewer workers; a similar situation exists with plant when it is hired.

Such self and temporary hiring employment techniques have implications for the types of production method used, as the latter have to be effective in the context of those employment practices. Generally, this means that techniques are relatively simple, do not use much sophisticated capital equipment and change slowly. When equipment is complex or expensive, it is hired complete with skilled operatives to avoid any potential skill difficulties. The same occurs with more technically complex materials or fittings.

The capital tied up in housing production, therefore, is generally small for employment practice reasons, as well as to ensure flexibility in face of varying demand. Surveys show that production capital is often financed out of retained profits and short-term credit loans, although land stocks are usually too expensive to be funded in this way (Hillebrandt, 1971).

Such an organisation of production maximises the possibility of resources being fully employed elsewhere when one particular housebuilder has insufficient work. Furthermore, workers and plant exist in an institutional framework of well-developed sub-contract markets—a framework that has

evolved information networks about job opportunities which facilitate resource transfer. These are often informal in nature. Overall, consequently, housebuilding inputs, including labour, should be more fully and effectively employed in countries that have construction industries with 'flexible' labour practices. In contrast, countries that require direct employment through labour laws are likely to impose significant periods of idle time on workers. This idle time may occur through more extensive periods of unemployment. Firms, for example, may be reluctant to employ extra workers because of future workload uncertainties or due to the implicit cost associated with hiring when subsequent firing is expensive to undertake. Alternatively, the idle time may lower firm efficiency, with firms holding onto under-employed staff because it is too expensive to lay them off.

Unfortunately, there are no rigorous, empirical cross-country studies of employment outcomes in housebuilding and construction in general by which to test these labour market hypotheses. However, both theory and the fact that building firms adopt the flexible model whenever they can suggest that the enforced direct employment option is a more expensive and less efficient mode of operation. Furthermore, direct employment labour laws impose considerable costs on those workers that cannot find jobs or try to find work again when they are laid off.

In countries and regions where the climate makes it impossible to build in the deepest winter months, for example, the large-scale switching of resources between housebuilding and other activities is obviously imperative at different seasons of the year. Traditional migrations are made between, say, summer housebuilding and winter forestry or between educational establishments and summer vacation building sites. Similarly, in countries with large agricultural sectors that have heavy demands for labour only at peak times, such as harvests, another pattern of seasonal job shifts in and out of housebuilding tends to occur.

Some have argued that labour sub-contracting is bad for building quality and productivity, because it leads, first, to rushed work and, secondly, to a slow decline in the skill level of the construction workforce (Clarke and Wall, 1996). The first claim is suspect because of the information asymmetry problem, mentioned earlier. The second argument is a 'tragedy of the commons' externality type argument in which no-one is prepared to train skilled workers because they will always be poached by others. It is difficult to see how the nature of the employment relation changes that argument much, however, because the incentives for a trained worker to move to a better-paid job would not alter as long as firms free-ride on other's training expenses.<sup>1</sup>

The sub-contracting of tasks has important implications for the firm structure of housebuilders. It means that, at low levels of output, housebuilders can be very small entities indeed. A one-proprietor entity, for example, can hire outside help for most construction tasks. Even larger firms, when measured by their output, need only have a limited direct production workforce, consisting primarily of those managing sub-contractors or ensuring a steady flow of materials or skilled operatives fixing incomplete or poorly done tasks.<sup>2</sup>

Many firms find that they can also keep management costs down by specialising in only one form of housebuilding (such as single-family owner-occupation or large multifamily structures). This arises because different types of built structure often require distinct construction processes and, hence, skills to manage them. When structures are more complex, moreover, this complicates design, materials procurement and logistics. Building firms frequently outsource professional tasks, such as design and engineering work.

Some firms, nevertheless, straddle different types of building. When they do so, construction firms frequently utilise the M-form type of management structure (Williamson, 1981), with quasi-independent subsidiaries to limit management disec-

onomies. Firms' strategic choices over market segments in which to be active, therefore, simultaneously have implications for their internal organisational structures and management needs. Yet, as scale economies are low, the benefits of the extra size that may result from winning work across a variety of types of construction is limited or may even be negative, as management diseconomies set in. When firms diversify, consequently, possible increased unit costs in production may have to be compensated for by other benefits, such as risk-spreading.

Sub-contracting, it can be concluded, has significant impacts on firm organisational structures. The practice considerably enhances the ease of entry and exit from housebuilding and, hence, the degree of competition within the industry. Yet, some countries, especially in Europe, ban extensive sub-contracting and their employment laws require that workers are hired on a permanent basis. This is the case in France, for example, although some sub-contracting has been permissible there since 2001. The arguments above would suggest that such a ban leads to higher construction costs. Of particular interest in the context of the arguments being made here is that the legislation would also be predicted to create a different array of types of housebuilding firm from those prevalent in countries with extensive sub-contracting or day labour.<sup>3</sup>

In the French situation, it is to be expected that most firms obey the spirit of the law and employ large, direct workforces. On the basis of the arguments outlined above, therefore, they would be predicted to be bigger in terms of employment size than in the sub-contracting institutional framework and face higher labour and plant-related costs. Such cost pressures, furthermore, encourage firms to diversify in order to steady workloads and cover overhead costs. They pass the resultant extra costs onto clients in higher building prices.

This argument, consequently, predicts that the scale and scope of housebuilding firms will be greater in countries with strict employment legislation and housebuilding costs in such countries will be relatively high.

Some French evidence seems to confirm this prediction, particularly the fact that large construction firms have increasingly moved into housebuilding (Campagnac, 1992; Campagnac and Winch, 1995) as part of a diversified portfolio of construction activities.

Some housebuilders in restrictive labour legislation countries, however, choose to ignore such laws and illegally sub-contract. This leads to 'formal' and 'informal' construction sectors. Informality is prevalent in housebuilding because of the frequently small scale of activity, which makes it difficult for governments to police. This dualism can be seen, for example, in Germany, particularly between those building workers permanently living in the country and the large influx of extra building workers from lower-wage European countries. In France, the problems of monitoring informal building labour have helped to generate further legislation. Since 1990, for example, the signing, and registering, of a 'construction contract' is compulsory before a house is built. The claimed objective is to provide better protection for clients, but it also 'formalises' building work, so that it has to conform to employment law. The system, in practice, has unsurprisingly proved difficult to administer. The professional body representing housebuilders (Fédération Française des Constructeurs de Maisons Individuelles) has recently produced a statement on the need to ensure full enforcement of the law, because

understandably they regard the employing of cheaper, illegal, casual labour as unfair competition. It claims that over half of single-family dwellings are constructed illegally (Bâtirama, 2002). Thus, labour legislation, ostensibly aimed at improving the efficiency of the construction industry, actually mitigates against competition based on relative efficiency and, instead, encourages it on the basis of whether or not to conform to the law.

Traditional small builders and small proprietor-run firms tend not to be affected by restrictive labour legislation. Consequently, they are protected to a degree from competition from larger, more 'modern' developers and builders. This may help to explain why a traditional type of housebuilding, owner development, is so prevalent in countries like France and Germany. With owner development, individual home-owners buy plots of land and then hire some organisation to build their home for them. It may be a builder, who provides an off-the-peg design or an architect and a group of independent 'jobbing' builders specialising in particular housebuilding trades. Owner development represents around half of all the new dwellings produced each year in France. In respect of single-family housing, the data suggest that most in France are owner-developed (Table 2). In Germany, many owner-occupied houses are built in a similar way and it is common in Europe's Mediterranean shore-

**Table 2.** Types of new development and dwelling in France

Type of development	Percentage share in 1999	Type of dwelling	Starts in 2001 (000s)	Percentage share in 2001
Owner-developer <sup>a</sup>	52	Single houses	172	48
Construction firms	27	Grouped houses	43	12
Social and semi-public developers	12	Flats	128	36
Other	9	Other	14	4
Total	100		357	100

<sup>a</sup>Owner-occupiers that commission a dwelling to be built on a land plot they already own.

Sources: Dwellings, INSEE; Developments, Ministère de l'équipement, des transports et du logement, Paris — DAEI-SES: Sitadel.

line countries. This owner self-build market is ideal terrain for the small builder, but they share it with larger firms that sell and build standardised designs, sometimes in a partially prefabricated form.

Even in countries with a much higher preponderance of mass-market housebuilders, there are some individuals who buy land and hire agents to design and build their homes (Barlow *et al.*, 2001). In those countries, however, it is probable that such methods tend to occur at the upper end of the market; yet, as has been seen, it is the owner-occupied mass market in France.

### **The Land Market and Residential Development**

The land market is like any other in that prices are determined by the interaction of demand and supply. In the aggregate, the land market can consequently be represented in the normal competitive way. What is important for examining the organisational relationship between the land market and housing development, however, is the way in which actual land plots are bought and sold.

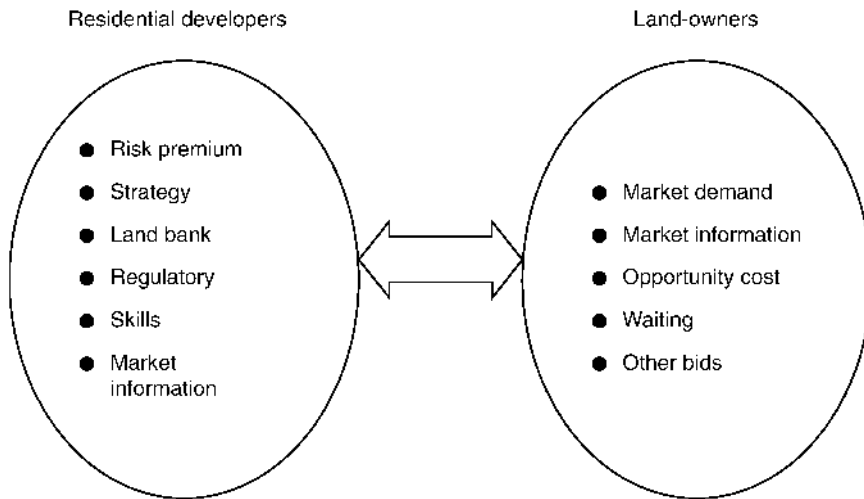
A distinctive feature of the land market is that each building plot has unique locational characteristics. Land sites, consequently, are imperfect substitutes for each other. Partly because of this locational characteristic, what is built on any particular site is not a standard 'can of beans' style product, but a unique set of built structures. Developers consequently have to conceive of a project and make the appropriate calculations about likely costs, uncertainties and returns. They also have to take into account the effects of any new project on the firm's overall strategic objectives. Land development outcomes are highly risky. An indication of the greater riskiness of land development can be seen in the generally higher volatility of residential land prices compared with house prices.

The land development process is often more capital-intensive than housebuilding, which intensifies the risks. Land has to be purchased, time has to be spent passing

through regulatory procedures and the site has to undergo any necessary and expensive works required to enable individual building plots to be prepared.

The construction and project-risk characteristics of individual sites can be pooled by firms by developing more than one site at a time. Greater firm size may also lower borrowing costs as lenders can more easily monitor loans. The land development process, consequently, suggests that greater firm size is a benefit. The size of the risk-pooling benefits depends on the spatial level at which risk-pooling ceases to outweigh any counteracting management diseconomies of scale. Most market information suggests that this point is probably reached by, at least, the regional level. Any higher spatial pooling advantages depend on the degree of correlation between regions' housing markets. In a country like the UK, the literature suggests that regional housing markets move quite closely together, although house prices are more volatile in the South East which leads other regions over the course of the housing cycle (Meen, 2001). Builders may consequently be able to pool risks by operating in the South East and several other regions simultaneously. In Australia and the US, the regional pattern is more variable (Polakowski and Ray, 1997; Meen, 2001), so again there may be risk-pooling benefits of housebuilders adopting a multiregional strategy. Multiregional strategies, none the less, do not imply the need for 'national' presences by operating throughout a country. In this respect, housing is unlike many other consumer goods industries, where the importance of brands and production technologies encourage operation at the national and international levels.

Land-owners and developers enter negotiations about the price and timing of land purchase. Land acquisition can either take the form of outright purchase or an option, which is a futures contract to acquire land at a later date subject to specified conditions. The nature of the land purchase negotiation has implications for firm organisation. In those negotiations, key issues are the trans-



**Figure 4.** Negotiating over development profit and land price.

parency of a site's development value and the current phase of the housing market cycle. If there have been many similar recent land transactions in a locality, a land's value as a residential site is easy to identify for both parties, so that the negotiations should be straightforward. In many situations, however, there is greater uncertainty over land development value. In such situations, negotiation is more significant and strategic.

Figure 4 illustrates some factors that influence land-owner and developer negotiation strategies. Land-owners' positions are influenced by the state of the local land market and their alternative options, including the possibility of holding onto the land until better offers come along. Developers, in contrast, in order to strike a good bargain are likely to emphasise the potential riskiness of their proposed development. They may also gain through their superior knowledge of the local housing market and the planning and other regulatory systems, which enable them to maximise both their and land-owners' returns if land-owners co-operate. Impact fees and planning obligations payable to the local municipality further complicate land negotiations. With these, developers again generally have superior knowledge to land-owners and they can assist land-owners over such matters, if the price is right.

Land banks may also offer developers negotiating advantages, because they mean that a developer is not forced to buy but can instead temporarily run down land stocks. Land banking helps consequently to facilitate a strategic view by developers of the land market. One component of strategic land holdings may be spatial land strategies. These put developers in a good negotiating position with land-owners, because the latter will know that the former can take their housebuilding activity elsewhere. They also form part of interdeveloper competition—a large development in a locality by one developer, for instance, may block a similar move by another one for fear of creating local oversupply.

Many of the developer negotiation factors just highlighted suggest that there are advantages to greater organisation size in residential land purchase and development. This is because larger enterprises have employee skill-bases, capital-bases and land banks that enable them to spread risks, lower financing costs, improve negotiating positions with land-owners and facilitate strategic actions. This does not mean that smaller developers are necessarily competed out of the land market, rather that their operations are likely to be more risky and credit-constrained.

### *Land Development and Housing Construction*

An obvious producer firm distinction in housing is between those enterprises that purely undertake land development, those that solely build housing by acquiring pre-serviced building plots and those enterprises that combine both the land development and building functions. In some countries, the actual division between these types of firm, and the relative market shares they have, is strongly influenced by government policies. Yet, in most situations, market forces seem to be the prime cause of the separation or combination of land development and housebuilding. This section provides some suggestions as to what those forces might be.

*Regulation.* Government policy has the greatest influence in Europe. This is not surprising as, in many European countries, land-use planning and housing policies are strongly interventionist. The introduction of large-scale social housing programmes in the middle decades of the 20th century, for example, was, in part, based on criticism of pre-existing housing development and its design, as well as constituting a sustained attempt to provide better housing for low-income groups (Swenarton, 1981). As a result, social housing landlords became major land developers from the 1920s onwards, as well as large-scale landlords. They undertook the development function in new housing, for many years priding themselves on their revolutionary estate designs and built forms; whilst they overwhelmingly hired private building contractors to build the actual structures. There was some attempt to municipalise housebuilding completely, by bringing it under the control of state housing agencies or local authorities. Such moves tended to have only limited impact in new building, although they were far more influential in social housing repair and maintenance (Briscoe, 1990).

In the 20th century, furthermore, policies were introduced in Europe that made public

or semi-public authorities key land development agencies for all types of property development: for example, in the Netherlands, France, Germany and Sweden (Barlow and King, 1992; Golland and Boelhouwer, 2002). These bodies, generally under municipal control, took over the function of traditional private-sector land developers, relying for funding on central or regional government grants and public-sector banks for loans. In most of these countries, however, such land development practices generally did not become universal, so that purely private land developers continued to exist in large numbers.

### *Private Land Developers and Builders: Separation and Combination*

Purely private-sector land developers are, of course, the most common type of developer in market economies, apart from in a handful of European countries. Yet, it is still possible to observe significant differences in the institutional structure of the development process. Most notably, there is often an organisational separation between land development and housing construction; at the same time, the two aspects are also often undertaken by one enterprise in a combined way. These two forms, independent developers and builders and combined developer-builders may even exist in the same housing market. The separate arrangement is common, for example, in Australia and the US,<sup>4</sup> and it was prevalent in Britain's primarily private rental housing system prior to 1914 (Ball and Sunderland, 2001). In contrast, in modern Britain, development and building are now generally combined under the control of one housebuilding firm that buys sites, erects homes and sells them. Why should such distinctions occur and why are they important?

The relative riskiness of the two aspects of development and building and the competitiveness of land markets in different countries may together account for such organisational differences. It was noted earlier that land development was a more

risky activity than that of building, so returns should be larger for it to compensate for the extra risk. So, if entry and exit is easy in these two aspects of housebuilding, competitive pressures should lead to a simple division of land development and building into different types of enterprise, because this is the least-cost option in a risky market.

The argument is as follows. When relatively small housebuilders can buy serviced sites from land developers, they can enter and exit the industry easily without the encumbrance of land development procedures and associated capital costs. They can choose their sites if they wish from more than one developer, spreading project-specific risk and encouraging competition between land developers. In competitive land and housing markets, with, say, a ready supply of greenfield suburban land, project-specific risk may well be high because of the competition from other local developers. Builders' and developers' decisions to build and put land plots onto the market, when added altogether, might also lead to excess supply, so that market-based risk is similarly high. Being able to sell plots to builders who then build houses and sell them, spreads the risk of losses between developers and builders. Each has to commit less capital for their respective stages of the housebuilding process and, equally importantly, the time that capital has to be committed before a profit can be taken is far less than for firms that both develop and build.

The suggested hypothesis here, in summary, is that in competitive markets differences in risk and returns between the development and building aspects of housebuilding create a tendency for the land development and construction sides of housebuilding to be separated. Combined developer-builders may well still exist in competition with such firms, but the predominant tendency would be towards separation. In such market contexts, furthermore, there should be a large turnover of housebuilding and real estate development firms, because of the ease of entry and exit and the scale of risk. Such a firm structure has been reported

by several studies of housebuilding in the US and Canada, where such characteristics tend to prevail (Clawson, 1971; Grebler, 1973; Buzzelli, 2001). A recent study, furthermore, suggests that there are systematic spatial variations in the average size of homebuilders in such markets; these depend on, for example, whether the urban area is growing, when firms tend to be larger, or contains small-scale, development restrictive, local governments, where firms tend to be smaller (Somerville, 1999).

When land supply is restricted, in contrast, as it is in most of urban Britain, the attractiveness of combining housing development and building is greater. In this market context, holders of residential land sites develop a degree of monopoly power through the land they own. With restricted land supply, the riskiness of development is diminished as individual project risk is less than in the competitive market case, and there is less chance of spatial competition between developers and builders generating overbuilding. However, there is still much risk associated with general market volatility.

So why combine development and building, when this monopoly power could be exercised by a pure land developer? The answer could be that combining development and housebuilding heightens firms' influences on local housing and land markets. If, for instance, developers sold plots on to separate housebuilders whenever they were offered the current market price for land, then the latter would determine when and how much new housing was supplied. In contrast, unified developer/housebuilders can command significant residential market shares in localities with limited land supply and, so, have a greater chance of influencing both housing output levels and local land prices, because conditions of monopolistic competition would then prevail in both markets.

#### *Owner-occupied Housebuilding in Britain*

In Britain, land supply is frequently highly restricted, so the market-position benefits of

combining development and building are brought to the fore and large regional housebuilders predominate in new housing development. Such developer-builders frequently build up large strategic land banks and, because of their size, have a significant influence in the residential land market itself. Nevertheless, as entry and exit from both housebuilding and land development are still quite easy, the oligopolistic position that some UK housebuilders manage to create probably does not lead to large monopoly profits for them, but neither does it force firms to operate in the most efficient ways possible as competition is blunted.

Thus, an ability to influence strategically the markets for residential land and new housing is a likely cause of the combination of the developer and builder roles in modern British housebuilding. British planning authorities, in any case, are said to have a preference for dealing with larger, professionally staffed, building firms, because they are easier to deal with, more knowledgeable of planning practices and can be relied on to conform to planning requirements (Ball, 1983; Rydin, 1985).

The rank-size distribution of housebuilders in mid 1990s Britain shows that it is highly skewed with a number of large producers and a tail of smaller, but still significant, firms—most of which are combined developer-builders (Ball, 1996). Suggested reasons for scale economies for such enterprises were considered earlier and relate to risk-pooling, purchasing and finance economies, and strategic behaviour. There are also size benefits through the marketing gains of having a well-advertised sales portfolio of new housing that is ‘brand imaged’. Most UK housebuilders are regionally based with a complete national presence being rare, as can be seen in Table 3. Smaller British housebuilders, of which there are thousands, tend to survive in this market environment through the idiosyncrasies of their owners, by taking greater risks or through specialising in small sites where larger firms are at either a cost, information or quality disadvantage.

## The Dynamics of Industrial Change

The ease of entry and exit from housebuilding and the riskiness of land development mean that housebuilding is an industry with substantial enterprise turnover, as noted above. Such churning leaves few firms untouched. Hardly any of the major British housebuilders have had a continuous existence in approximately the same form for the past two decades.

Industrial change is driven by the property market cycle and regulatory changes, rather than by the technological factors, scale and scope economies and international trade pressures that are common in many manufacturing industries (Chandler, 1977; Porter, 1990). During upswings in the housing market, particularly if they are long-lasting, new entrants flood into housebuilding and existing firms expand. This often occurs alongside hype that the industry has changed, or that some firms within it have discovered a new formula, or that for some reason size has now become more important. The subsequent downturn, however, leads to a shrinkage in both the number of active firms and the size of those remaining, with the unluckiest or most overcommitted and overoptimistic ones failing.

The land market plays a part in generating firm restructuring, especially when land is in temporary or long-term short supply. During housing market upswings, firms may find that it is cheaper and quicker to acquire land by taking over another builder and its land bank than through direct purchase in the land market. Similarly, surviving firms may acquire the land and other assets of the failing firms cheaply during housing market slumps (Ball, 1988).

Occasionally, changing demands for housing create new market segments in which specialist firms can grow up. The inner-city ‘loft’ and ‘luxury apartment’ markets have already been mentioned. Retirement housing is another case where specialists have emerged with rising retiree wealth and the growing need for specialist care facilities with ageing populations. Both these markets,



**Table 3. Rank of top 10 housebuilders, by British region, 2001 (largest first)**

	E. Anglia	London	East Midlands	North West	North East	Scotland	South East	Wales	South West	West Midlands	Yorkshire
Persimmon	Barratt	Barratt	David Wilson	Redrow	C M Yuill	Barratt	Barratt	Persimmon	Barratt	Barratt	Barratt
Wimpey	Bellway	Barratt	Bellway	Barratt	Sir Robert McAlpine	Bett	Redrow	Redrow	Persimmon	Westbury	Persimmon
Wilcon	Berkeley	Barratt	Barratt	Taylor Woodrow	Bellway	Redrow	Taylor Woodrow	Barratt	Bellway	Wimpey	Taylor Woodrow
Bovis	Crest Nicholson	Wimpey	Wimpey	Bellway	Persimmon	Persimmon	Berkeley	Bellway	Westbury	Persimmon	Wimpey
Abbey	Laing	Persimmon	Persimmon	Miller	Wimpey	Cala	Persimmon	Bovis	Wilcon	Taylor Woodrow	Redrow
Bellway	Wimpey	J S Bloor	Persimmon	Persimmon	Bowey	Taylor Woodrow	Rialto	Westbury	Prowding	David Wilson	Haslam
David Wilson	Weston	Wilcon	Wilcon	Wilcon	Taylor Woodrow	Wimpey	David Wilson	Wimpey	J S Bloor	Redrow	Bellway
J S Bloor	Centex	Westleigh	Berkeley	Berkeley	Barratt	Miller	Wilcon	Anwyll	McCarthy & Stone	Watkin Jones	Harrow
Bennett	Fairview	McCarthy & Stone	David Wilson	David Wilson	Brosely	Morrison	McCarthy & Stone	Cannon Kirk	Crest Nicholson	Redrow	Miller
Kier	Taylor Woodrow	Henry Boot	Centex	Centex	Dunelm	Stewart Milne	Bovis	David Wilson	Wimpey	Miller	David Wilson

Notes: Excludes housing associations. Based on detailed planning permission submissions.  
Source: *Housebuilder* (2002).

moreover, have benefited from regulatory change, particularly in planning and infrastructure provision.

Regulation in the broadest sense, furthermore, is not simply a government domain, but can arise, for example, from changing financial market practices. From the 1950s to the 1990s, many large UK housebuilders were parts of far-larger construction conglomerates. This is rarely the case now. This development has probably been aided by the demand for greater financial transparency from construction firms by modern banking and capital market lenders. Transparency is hard to make credible in a multifunction construction enterprise, which must have encouraged the shift of firms towards clearer core functional activities (Ball, forthcoming).

## Conclusions

This paper has examined reasons for differences in the organisational structure of housebuilding in different countries. It focused analysis on potential economies of scale, market factors, information asymmetries, regulation and risk. The great variety of ways in which housing is built, it was argued, could be explained in terms of a limited range of concepts commonly used in industrial economics. Market instability is an important factor, but is insufficient to provide a full explanation because it is a common feature of durable goods industries, most of which are not organised in the same ways as housebuilding. Locational specificity is important, especially with regard to the land market. The type of housing being built and the markets in which they are sold are further influences. Information is particularly important in explaining the economic characteristics of housebuilding, because of the nature of both the development and production processes. Strategic behaviour enters the equation, particularly through behaviour with regard to the land market and residential development strategies. Regulation in labour markets also has considerable consequences for firm structures. Land availability and the impact of planning regimes on it, both affect

the range of functions undertaken by individual enterprises and the size of firms.

Many conclusions must remain speculative, however, because there is insufficient empirical evidence to test hypotheses rigorously and little pre-existing literature. However, the arguments made here correspond to general observations about the structure of countries' housebuilding industries.

Overall, whilst it may not be possible simply to treat housebuilding as a competitive industry with the standard structure–conduct–performance paradigm, nevertheless, standard economic analysis is still useful in explaining observed institutional structures. This, of course, does not mean that housing supply is necessarily riddled with monopoly, rather that it is quite complex and needs detailed empirical investigation before robust conclusions can be reached about its operation and performance.

Differences in institutional structures affect supply responses and general levels of industrial efficiency. Not too much can be said on a comparative basis about relative supply responses internationally, apart from the fact that they are likely to be highly variable and depend on the competitiveness of the land market. Furthermore, public policy towards housing and land markets tends to neglect any consequences for housing supply. Interventions by governments into housebuilding, nevertheless, have not had much success when tried.

## Notes

1. Compulsory industry-wide training levies and grants to firms offering training and individuals undertaking it are policies aimed at internalising these externalities—as, for example, with the Construction Industry Training Board in the UK ([www.citb.org.uk](http://www.citb.org.uk)).
2. Sub-contracting may also arise as a means of avoiding taxes in contexts where the effective tax rate on the self-employed is lower than on directly employed workers. Such tax effects, for instance, contributed to the rise of labour-only self-employment in the UK from the 1970s onwards. Conversely, tightening of the tax rules in recent years and legislation creating a more flexible labour market have

led to a growth again in the share of direct employment. These tax considerations, however, do not negate the points made here about sub-contracting, because directly employed workers obviously can be employed by sub-contractors as well as by 'main contractor' housebuilders.

3. The information on France is based on discussions with officials at the French Ministry of Housing and the French Federation of Developers (FNPC) in 2002, as well as web searches (Batirama, FNAIM). The analysis and opinions expressed here, however, are the responsibility of the author alone.
4. An interesting history of such a developer, Newland Communities, can be found at [www.newlandcommunities.com](http://www.newlandcommunities.com).

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