The Canadian Urban Housebuilding Industry:

Firm Size Structure and Production Methods in Ontario, 1945 - 2000

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Abstract

The North American housebuilding industry is central to the production of urban space and the provision of housing. Yet surprisingly, housebuilding has received little scholarly attention in the housing, urban studies and industrial organisation literatures. Most of the major studies of the industry appeared in the early postwar years. These early studies interpreted the industry in terms of the preferred model of industrial organisation at the time, a model based on Fordist economies of scale, vertical integration and a highly segmented division of labour. Housebuilding's many small firms, labour intensive methods and subcontracting seemed underdeveloped, even backward, to observers. However, recent industrial restructuring has called into question the superiority of Fordist methods and permits a reinterpretation of housebuilding. This thesis provides such a reinterpretation based on a review of the organisation of housebuilding in North America since WWII and a case study of the industry in Ontario and its major urban region, Toronto.

The case studies of Ontario and Toronto are based on quantitative and qualitative data sources and are combined with published and unpublished sources on housebuilding throughout North America since WWII. The principal sources used in this study are Canadian industry trade journals, a census of builders in the Province of Ontario from 1978 through 1998 provided by the Ontario New Home Warranty Program, and corporate interviews with a selection of builders in the Toronto region. As in North America since

WWII, the case studies of Ontario and Toronto show that housebuilding remains a deconcentrated industry of small and transient firms. Entrepreneurs face few barriers to entry primarily because they can rely on a decentralised social system of production subcontracting. This permits a constant stream of new firms but also supplies many of the eventual exits as well. As such, housebuilding remains persistently deconcentrated while its firms experience constant turnover.

On these grounds, criticisms of housebuilding by early observers are well-founded. Firm transience in an industry which supplies the most important commodity to the majority of North Americans continues to be a serious problem. However, interpretations of the small building company and its production methods as backwards were misplaced. Observers failed to appreciate the importance of the conditions of production and the market for new houses. The need to move production from site to site, to accommodate varied housing styles, weather, climate and market cyclicality all have consistently made production subcontracting an attractive method of operation. Indeed, many of the long-criticised features of housebuilding have come to be debated, and endorsed, in the literature on industrial restructuring in recent decades. For these reasons, housebuilding cannot be interpreted as backwards. This study joins a growing body of literature which argues against the notion of an optimal end state to industrial development. Industrial organisation may vary through time and across space. In remaining persistently deconcentrated by many small firms using extensive subcontracting methods, housebuilders merely represent efficient responses to the product and market conditions they face.

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Introduction

The housebuilding industry plays a critical role in housing North Americans, building urban space and the overall economy. Most urban residents in North America live in single-family dwellings constructed by the housebuilding industry. Such housing also constitutes the single largest land use in the typical North American city - - 40% on average. And the builder plays a key role in connecting resources and products with consumers. In these ways, the housebuilding industry is central to national culture and economy in Canada and the United States (US). Yet we know little about it. This study documents, analyses and interprets the organisation of the housebuilding in North America since WWII.[1] Through a case study of Ontario, and especially Toronto, this thesis will address these gaps in urban studies, housing studies and industrial organisation.

Following WWII, a set of broad forces led to similarities in urban expansion and housing provision in all North American cities. In both Canada and the US, urbanisation continued steadily until at least the 1970s. At the same time, absolute population growth meant that urbanisation was associated with a rapid increase in the number of urban residents. The demand for housing in cities also changed. Prewar trends, whereby urban residents tended to own more than rent, would gave way to rising homeownership of single family housing in cities. Urban consumers turned more to homeownership than they had in the past, in large part because real incomes rose and consumer credit became

more accessible. Accelerating such trends further was diminishing average household size beginning in the 1960s. Taken together, postwar urbanisation placed heavy demands on the urban residential construction industry.

The industry responded and the number of annual completions supplied by the housebuilding industry rose rapidly after WWII. Postwar urban housing quickly became a widespread commodity of market exchange between producers and consumers. Postwar urbanisation is very much a story about the provision of housing. Urban expansion not only supplied the infrastructure for economic development, such as factories and transportation, but urban space itself increasingly became a site of capital formation and wealth accumulation for producers (Clarke, 1992). Industries would grow and develop to serve this site of accumulation. In the case of single-family housing, consumer demand and urban spatial growth led to the full development of an industry for this market: housebuilding (McKellar, 1993).

Despite such development, students of housing have not paid enough attention to the housebuilding industry. Most studies of housing have been concerned with issues of demand and consumption. Supply-side housing studies have tended to focus on either the role of the state in providing social housing or on the land developer as the private-market counterpart. However, the housebuilder is a distinct agent; the construction of housing is quite distinct from the land development process.

We can understand housing provision from the perspectives of business history and industrial organisation. Early in the postwar years, a handful of scholars recognised

the importance of housebuilding. Miles Colean (1944) wrote of the "problems and prospects" for American housing; Leo Grebler (1950) of the "production of new housing"; Sherman Maisel of "housebuilding in transition"; and John Herzog (1963) of "the dynamics of large-scale housebuilding". These were the major studies of the first two postwar decades and, as such, they speak volumes about the study of housebuilding. First, none is Canadian. The Central (now Canada) Mortgage and Housing Corporation (CMHC) published "Housing and Urban Development" in 1956 which had a small section on housebuilding. This piece stands out in the Canadian context but is hardly comparable to the America work. Second, following this early flurry of studies on housebuilding, the latter half of the postwar period has yielded far less research. Most have not been empirical (Denowitz, 1982; Eichler, 1982). In Canada, there are hints of more recent interest in the industry but few studies speak to its firm size structure as did earlier works (Newman, 1984; ECC, 1975). A major study commissioned by the CHMC (1989) was empirical but was largely synthetic. It had to be for the available data on the industry are few and difficult to compare. For these reasons, the early postwar studies stand as the major studies of housebuilding in North America. We know little about the industry in more recent decades, especially in Canada.

Almost without exception, studies of the housebuilding industry have espoused the view that the industry was underdeveloped. Observers have been clear about their preference for something other than the methods that housebuilding had inherited from the prewar years. In particular, the authors argued that the industry's many small firms

and subcontracting methods needed rationalisation if they were to produce affordable homes. Typical of this viewpoint, Fortune Magazine wrote in 1947 that housebuilding was "the industry that capitalism forgot" (see Schlesinger and Erlich, 1986). Such were the 'problems and prospects' of 'housebuilding in transition', a rationalisation that would occur naturally or should be encouraged. The ideal for contemporaries was the Fordist model of industrial organisation, one based on vertical integration, economies of scale and a highly segmented division of labour. Since Fordism had proved itself to be capable of productivity gains in manufacturing and in raising America's industrial dominance, it seemed that there was no choice. After all, it had grown to serve the same mass markets faced by housebuilding. The 'large-scale builder', as the housebuilding firm which most closely approximated the Fordist manufacturer, naturally drew the attention of observers. In the absence of major studies of housebuilding since those early years, this perspective has persisted to the present. A reinterpretation is necessary.

The housebuilding industry may be reinterpreted in the light of recent industrial restructuring. Since the early 1970s, much has been written about the changing nature of economic competition in advanced industrialised countries, and the implications this has for firms and their industries. New technologies and market trends have brought a wave of restructuring away from prior conditions. In general, the argument is that firms and industries could no longer base their competitive strategies on expanding mass markets and long-established Fordist methods. Firm structure and operations based on these conditions came to be regarded as rigid and inflexible. Greater uncertainty and risk

necessitated a new approach. This narrative has been applied especially to manufacturing and the auto industry in particular, which has always been considered prototypical.

To cope with changing circumstances, many firms, industries and regions have restructured away from this rigidity. Influenced in part by changing niche markets, and facilitated by new technologies, a general switch has apparently been made toward 'new industrial spaces' of flexibility (Scott, 1988). Thus, in place of scale economies and vertical integration have come external economies of scale and scope. In part, new manufacturing technologies have allowed these changes, and adaptation has become a necessity of 'the new competition'. These changes also represent a move away from centralised productive activity 'in-house' under the aegis of one firm to a social system of decentralised production. Outsourcing has been the primary avenue for this 'decentralisation'. Auto manufacturers, for example, have turned to production subcontracting for sub-components and assembly. The story is similar in many other industries. It is in the context of these sorts of changes, particularly as they are conceptualised, periodised and favoured by industry observers, that this study supplies a reinterpretation of housebuilding.

The first purpose of this study is to engage the literatures in business history and industrial organisation in order to place housebuilding in an industrial context. Such a context is necessary given the dearth of research on the industry and the misinterpretations that have persisted. The objective here is to draw out those issues in the literature which relate to points of criticism of housebuilding: the small-scale

operation and the supposedly primitive methods of subcontracting. In chapter 2, I argue that past observers were bound to misinterpret housebuilding because they did not fully appreciate the nature of the product, the housing market, or the conditions of production. Instead, they implicitly assume that housebuilding was the same as other sorts of activities such as auto manufacturing, and criticised it for not conforming. This led them to assume that small firms, symbols of underdevelopment and preservers of outdated production methods, would be squeezed out by the large, integrated builders that they preferred. Since the industry has not fulfilled these hopes and predictions, this begs the question: why not?

Since the housebuilding literature provides limited answers, the second and main purpose of this thesis is to analyse a case study of the industry in Ontario with a focus on the province's major urban region, Toronto. As I shown in chapters 4 and 6, in terms of its size structure the housebuilding industry in Ontario and Toronto is broadly typical of that in the rest of Canada and the US. The only major exception is the almost complete absence of a prefabricated home industry, which is more prominent in other regions such as Alberta and southern California. But in terms of the on-site production of houses, the case study is representative. The case study serves as a manageable context within which to study both the organisation and operation of the industry. The empirical work is based on the use of a combination of quantitative and qualitative sources. National industry trade journals, a census of builders in Ontario supplied by the industry's warranty program—the Ontario New Home Warranty Program, and corporate interviews with

selected builders in the Toronto region are the principal sources The data and methods are described in Chapter 3.

In presenting the empirical findings, the first objective is to extend existing information on the industry with innovative panel data for Ontario in the period 1978-1998. The main issues to be examined are the industry's firm size structure, and rates of turnover. Since the existing research on housebuilding is limited, especially for recent decades, the synthesis of empirical evidence is presented together with the analysis of Ontario in chapters 4 and 5. The second objective is to complement the data analysis with in-depth corporate interviews with a selection of builders in Toronto. The interviews made it possible to examine internal firm organisation and operating methods, issues that are central to recent industrial research. The analysis of the interviews is presented in chapter 6.

My research shows that, since WWII, housebuilding has remained an industry of many small firms and dispersed market share. The industry is composed of transient firms, many of which fail, while others engage corporate and competitive strategies to cope with market changes. Combined with qualitative information from trade journals and interviews with builders, the evidence shows that housebuilders are at once diverse, and yet more homogeneous than is traditionally thought. They are diverse in that they range widely in their scales of output and levels of transience. But at least in very recent years housebuilders are remarkably homogeneous in the way that they organise their production process. All rely on extensive production subcontracting and streamlined

administrative overhead to organise the production process. There seems to be little difference between builders of different sizes in terms of company organisation, building methods, pecuniary advantages and market strategies. It seems, then, that small builders should not be considered industry laggards and impediments to industrial progress, at least not in relation to their larger and preferred competitors.

On these grounds, a reinterpretation of housebuilding is suggested in the concluding chapter 7. I draw upon and contribute to a growing body of research which argues that industrial organisation may vary through time and across space (Gertler, 1988; Hiebert, 1990; Lewis, 1994). I argue against the assumption that industrial evolution takes a predetermined path toward some optimal end state of development. Past observers assumed this to be Fordism and criticised housebuilding for taking too long to get there. Recent industrial research has implicitly made the same assumption that new forms of organisation and operation represent the desired end state (Womack et al, 1990). But as Philip Scranton (1983) argues, industrial change must take account of locally embedded path dependence and historical contingency, an argument repeated by Michael Ball (1988) in relation to construction in the UK. From this perspective, housebuilding cannot be placed on a time-line and judged according to its relative state of development. Indeed, housebuilding has its own heterogeneity in production. In Ontario and Toronto, it is an industry with transient firms of wide-ranging sizes. Still, the general approach to production is similar amongst firms of all sizes. Moreover, a small group of large and small builders alike display behaviours characteristic of strategy and operations

that are now considered 'efficient'; 'flexible', 'agile' and 'advanced'. From this perspective, housebuilding is "not an industry that capitalism forgot" (Schlesigner and Erlich, 1986). Rather, the industry has responded to the nature of its product and conditions of production by taking on a deconcentrated firm size structure, a decentralised social system of production and firm flexibility.

Notes

[1] "Housebuilder" refers to a firm which constructs single-family housing. The housebuilding industry is therefore the industry constituted by the collection of such firms. Often conflated with land developers which may sometimes build single-family housing, housebuilders are quite distinct and usually separate agents. The core business of the housebuilder is to build single-family housing.

Chapter 2: Literature Review

In economic geography and allied disciplines, much has been written about social and economic restructuring since the 1970s. This research has focussed primarily on changes to industrial organisation, both as mirror and moulder of broader trends. The manufacturing sector, and in particular the auto industry, is central to this discourse for it has long been regarded as prototypical and has also been one of the industries most affected by recent waves of restructuring. While there is general acceptance about a broader social transformation, the issue of industrial restructuring is more contentious. One reason for the debate over the nature and extent of industrial restructuring is the absence of research on a wide range of industries which could speak to broader trends. Through the case of urban housebuilding, this thesis contributes to these ongoing debates.

There has been very little research on housebuilding in recent decades in North America and even the industry's general contours are unfamiliar to most. Despite the importance of its product, its flow-on effects and employment, housebuilding has been ignored and misunderstood. This represents a major gap in the literature on industrial organisation, as it does in urban geography and housing studies (c.f. Dicken, 1998; Hayter, 1997). The main purpose of this chapter is to set the literature on housebuilding in the context of the extensive research on industrial structure. This is done first by discussing the place of housebuilding in the housing studies literature. I then set out a general industrial context in terms of recent trends in social and economic restructuring

and the changes to industrial organisation that are thought to have accompanied these broader trends. I then turn to a discussion of historical and conceptual problems in the periodising of industrial organisation.

To begin to reinterpret housebuilding I argue that it must be understood according to its own conditions of production and consumption. These conditions vary greatly from those of most other economic activities. Thus, past criticisms have been misplaced and a re-examination is necessary. I also argue that the study of housebuilding can, in turn, throw new light on recent debates and can provide a fuller understanding of housing provision and the production of urban space.

2.1 Housing Studies

The housing studies literature has been primarily concerned with housing consumption rather than supply. We have a good understanding of general patterns of household formation and housing demand as well as residential patterns and mobility in the city (Bourne, 1981; Cater and Jones, 1989; Miron, 1988). This dates to the popularisation of concerns over the form and structure of the industrial city at the Chicago School beginning in the 1920s. Since then, scholars have filled in and revised models of the residential geography of the city by focussing on the local dynamics of the housing market (eg. Johnston, 1971; White, 1987). While the provision of new housing has persistently been acknowledged, as in models of filtering for example, it has mainly been treated as a background against which household movements take place.

When housing supply has been studied, the state or land developers have been the usual focus on attention. The state's role in the housing market has been mainly examined with respect to the direct provision of social housing, even if the private market has guided housing policy (Bacher, 1985). Compared with private provision, social housing makes up a small proportion of the housing stock. When attention has turned to the provision of single-family housing, it has focussed on land developers (Spurr, 1976; Lorimer, 1978; Feagin and Parker, 1990; Weiss, 1987). This is understandable because developers initiate the urbanisation of land, they often do construct housing and they are large, visible agents. As a result, we understand their organisation and operation quite well. But development is quite distinct from housebuilding. In fact, developers do not generally construct the majority of private market dwellings.

Research on housebuilding is probably the least-well developed area of the housing studies literature. Recent research has brought supply and consumption together in the study of aided self-help and owner-building (Duncan and Rowe, 1993). Historical in orientation, this work has shown that such practices remain significant in many western countries. However, in North America, the private housing development industry significantly diminished the contribution of aided self-help and owner-building early in the postwar postwar period. In many ways, the maturation of the housebuilding industry seems to have been inevitable. Wartime controls loosened to allow builders easier access to materials. Meanwhile the sheer number of consuming households was growing while they could afford to consume more housing. And the state was certainly supportive of private market solutions to rising demand and economic expansion,

especially through large builder-developers (Checkoway, 1980). Indeed, early postwar scholars in the US recognised the importance of housebuilding for its cultural, social and economic significance (Colean, 1944; Maisel, 1953). Since the 1970s, however, few major studies have been carried out (Carroll, 1988, 1998; CMHC, 1989; McKellar, 1993). Only a handful of studies represent this industry all all closer to the present (Doucet and Weaver, 1991; Harris, 2000).

With an understanding of housebuilding inherited from early postwar decades, the industry remains unfamiliar and misunderstood. As discussed below, early postwar studies often analysed the industry from a general perspective on industrial organisation popular at the time. However, this often led to misinterpretations about the industry's firm size structure and operating methods. In order to be able to supply a fresh interpretation, then, we need to place housebuilding in the context of general trends in industrial organisation. Once this is done, we can set out an interpretative framework with which to understand the empirical results of the thesis.

2.2 Periodising Industrial Organisation

2.2.1 Historical Context

Recent economic restructuring has prompted many social scientists to theorise such change and place it in historical context. The most popular interpretation, advanced by Piore and Sabel (1984), is that economic and industrial organisation have crossed a 'second industrial divide'. Like the divide between craft and industrial capitalism in the nineteenth century, this is supposedly ushering in new work relationships and

transforming the bases of competition between firms, regions and nations. The notion of a recent industrial divide has gained widespread purchase, though not all scholars accept its existence. After briefly outlining the key macro-scale features of this periodisation, I turn to a discussion of the industrial organisation considered typical on either side of this divide. Critiques of the existence of a divide are discussed at the end of this section and these set the stage for the inclusion of alternative industries and perspectives for a fuller understanding of industrial organisation.

Piore and Sabel's notion of a second industrial divide is couched in terms of the regulation theory of political economy. Widely accepted, regulation theory argues that recent waves of economic restructuring mark an end to an era of unprecedented economic growth (Boyer, 1990; Lipietz, 1986). Symbolically initiated with innovations at the Ford Motor Company just prior to WWI, and termed Fordism[1], this period is understood as one in which the state mediates, or regulates, a balance between production and consumption to manage economic expansion. Very much a product of Keynesian macro-economic management principles, this regulated relationship underlies the growth at the height of Fordism - - the postwar 'golden years' up to the 1970s. The restructuring that commenced in the 1970s is thought to have replaced Fordism with a new era termed 'flexible accumulation' (Harvey, 1988).

The macro-economic transition from Fordism to flexible accumulation is generally accepted among social scientists. The 1970s mark this transition, as a series of events militated against the state's ability to regulate continued economic expansion. Energy 'shocks' had begun to reveal the precariousness of the economy as it experienced

its first major recessions since the 1930s. What was also new, and unexpected according Keynesian economic management principles, was stagflation. Rising inflation amidst economic slowdown signalled the state's inability to manage the economy, this at the very time when its role in expanding social welfare programs was being questioned. Since the oil shocks, stagflation and retrenchment of the welfare state in the 1970s, economic growth has been halting and far more regionalised. The Fordist era of certainty and mass market expansion had come to an end and the state's role in aiding economic expansion is less well defined. As we shall see below, the responses of firms, industries and regions to this transformation exposed the ill-conceived notion of industrial 'best practice' of the Fordist era.

It is in this context that this thesis supplies a reinterpretation of housebuilding--an industry that always seemed out of place when compared with other apparently more successful industries in the Fordist era. The macro-economic transformation that began in the 1970s is all too often assumed to be accompanied by industrial restructuring. But, as shown below, several scholars have argued that the evolution of industrial production systems need not follow a single, linear path toward a presumed end state of full development. Past observers have mistakenly compared housebuilding to other activities, assumed the validity of the evolutionary path to Fordism, and misinterpretation has ensued. How can such a periodisation of social and economic change, particularly industrial organisation, help us to better understand housebuilding? And how can the study of housebuilding in turn improve our understanding of industrial organisation?

2.2.2 Perspectives on Industrial Organisation

The golden years of robust economic expansion re-established the trend of industrial development set in motion around WWI, particularly at the Ford Motor Company. Innovations at Ford's Highland Park assembly facility set American manufacturing technology on a new trajectory. Ford and its competitors turned the auto industry into a model of industrial development for its technical advancement and firm size, a model which came to be regarded as prototypical after WWII. However, as the second industrial divide set in, the security of such markets exposed the shortcomings of Fordist organisation and the relative attractiveness of a set of alternatives referred to as 'flexible specialisation'.

The emergence of alternative forms of industrial organisation in recent decades is usually pitted against a Fordist backdrop of 'rigid' manufacturing practices during the golden years. It is argued that predictable and growing mass markets presented firms, industries and regional economies with an apparently obvious choice: if consumption could be reasonably anticipated, there would be little risk in dedicating single-purpose resources to specific markets and foregoing the ability to remain diversified. The techno-organisational model of choice was Fordist, composed of the essential ingredients of vertical integration, economies of scale, assembly-line production and a highly segmented division of labour (Heron, 1988; Hounshell, 1984; Lewchuk, 1987). The end result was large-firm dominance--a model of organisation not necessarily shunned; indeed, it was favoured by many as we shall see below. In this way, the era of Fordist

accumulation is usually associated with a rigid form of industrial organisation tied to large-scale production technologies that would come to be regarded as problematic.

The reliance on such stable and growing mass markets would not last, nor could the form of industrial organisation put in place to serve them. The 1970s ushered in not only the macro-economic changes discussed above, but also new directions in consumer markets and technologies. Waves of industrial restructuring since that decade are attributed to firms' reorganisation to meet these new imperatives. Increasing market ephemerality, niching and rising consumerism are all thought to have forced firms away from long production runs of low quality standardised goods (Gertler, 1995). Instead, such redirection has necessitated flexible responses to rapidly changing tastes among several markets whilst quality remains uncompromised. Alongside these new imperatives has come the facilitating role of new technologies. Advanced manufacturing technologies have allowed firms to become more responsive to market changes and maintain quality output. Taken together, these supply- and demand-side changes constitute the 'new competition', a competition geared to risk reduction and market responsiveness. Hence the labelling of this period as one of flexible accumulation, with its attendant industrial organisation of flexible specialisation. But if Fordist production methods were unsuited to this 'new competition', what choices did firms have? What are the features of flexible specialisation?

By the 1970s, there emerged a number of alternative forms of industrial organisation which had already begun to expose the relative deficiency of Fordist methods. Productivity slowdowns among American manufacturers, particularly auto

assemblers, were in stark contrast to gains made by Japanese producers up to the 1970s. Japanese manufacturing methods as embodied in the Toyota Motor Company highlighted an alternative that came to be known as lean production (Womack et al, 1990). With heavy reliance on a number of features in work organisation, administrative structure but especially inventory management, lean production has come to be regarded as a better alternative. Just-in-time inventory control has become the hallmark of this system as it allows firms to reduce their commitments to the maintenance and handling of inventory and the risks associated with overcapacity. The contrast with Fordism is immediate. Through external firm relations, especially production sub-contracting, capacity could be added or downscaled without significant changes to the purchasers capital intensity or internal structure (Holmes, 1986). This kind of organisation facilitates firms' abilities to tap several markets at once and respond more quickly to evolving tastes. The introduction of advanced manufacturing technologies concomitant with the rise of lean production enables this system to achieve the quality of batch production and the overall scale and efficiency of large-scale output.

A second equally important model emerged alongside lean production which has also served as a post-Fordist prototype. Based initially on studies of the manufacturing districts of North-east Central Italy, this model became a regional-based paradigm for development through inter-firm collaboration (Scott, 1988; Storper, 1997). As in lean production, such networks could apparently respond quickly to market changes and maintain high quality output of batch-quantity production. The principal difference with lean production is that such regional based networks are not subject to the centralised

control of large and powerful firms--those purchasing from subcontractors. Inter-firm transactions between collections of small firms is the key feature of advanced industrial districts. In both models, however, we see the contrast from Fordist organisation with firm boundaries being transgressed for subcontracting and collaboration, production decentralisation in place of vertical integration, and an emphasis on quality. If these imperatives have wrought shake-outs in industries and regions, such models presented, as Piore and Sable argue, the "prospects for success".

Recent writing on industrial restructuring has suggested yet newer models of industrial organisation. Thus we read of 'agile manufacturing' and the 'virtual' or 'lights out' factory as the most recent developments (Schenk and Anderson, 1995). However important these might be, all of this points to the general consensus that new forms of industrial organisation have emerged since the 1970s. The basic dichotomy is between firm internalisation using vertical integration and scale economies versus external economies of scale and scope. In terms of manufacturing, the pivotal logistic feature is inventory production and control which contrasts Fordist internal buffer stocks versus inter-firm relations and just-in-time inventory management. Such restructuring allows for a re-assessment and, in turn, the inclusion of housebuilding into the discussion of industrial change. In this context, however, there is some debate about the periodisation of industrial restructuring. Therefore, prior to turning to the literature on housebuilding, I will highlight the main criticisms of the literature on restructuring, criticisms which continue to be debated. This study of housebuilding therefore also adds to this ongoing debate.

2.2.3 Debates on the Evolution of Industrial Organisation

According to this stylised description of industrial change, it would seem that there was a clear break from Fordism to flexible specialisation at the so-called second industrial divide. Much of what is written about such contrasting systems highlights the differences between traditional mass producers in the US with Japanese lean production and advanced industrial districts (Kennedy and Florida, 1993). But upon closer inspection, several scholars have found that these apparently opposed systems actually share many similarities. On this basis, some have argued against the uncritical acceptance of a divide in the evolution of industrial organisation, even if such a notion persists as the dominant discourse in the industrial literature.

One key distinction commonly drawn between such systems is in terms of market responsiveness and flexibility. Flexibility is presented as a new feature of industrial organisation beginning with lean production and advanced industrial districts. However, a closer examination of Fordist methods reveals a more nuanced picture than is usually presented, or assumed, in much of the literature. As early as 1926, when Ford's Model-T was reaching the end of its market life cycle, Chevrolet and Ford began to implement 'flexible mass production' to be able to supply a splintering market with different models (Hounshell, 1984). This kind of market responsiveness is ignored in much of the recent literature on industrial restructuring.

A related difference thought to exist between these systems is in their inventory control mechanisms. Inventory control is regarded as the central reason why Fordist and lean producers differ in terms of their internal control and external relations, their market

responsiveness and their exposure to risk (Womack et al, 1990). The Fordist model is presumed to rely on heavy buffer stocks while lean producers engage 'Just-In-Time' delivery systems to reduce risk associated with overinvestment. However, although flexible production is supposedly more responsive and less risky, vertical disintegration and reliance on external relations introduce their own elements of rigidity and exposure, for example in power relations between transacting firms (Gertler, 1988). Others have argued that there is in fact no real difference between inventory practices in these two models (Schwartz and Fish, 1998; Williams et al, 1992).

There exist further arguments against the notion of an industrial divide in manufacturing systems. Some have argued that flexible producers are still required to compete on the basis of price and internal economies - - key features of the Fordist model, even if spread over a range of products. In other words, the new competition is not based solely on product quality. Others have focussed their attention on work organisation. They argue that the freedom associated with assembly line work in the Fordist model, though small, is underplayed and that too much is made of supposed 'democratic' Taylorism under flexible systems (Kennedy and Florida, 1993; Lewchuk and Robertson, 1996; Nelson, 1975). Others still have exposed the exploitive work-related issues associated with advanced industrial districts, and pointed to the continued dominance of large firms in such networks (Harrison, 1994). Through these brief examples, we see that the historical roots of flexibility and risk aversion predate the second industrial divide while many features of Fordism continue. The persistence of the view that totally new systems have emerged may be based on the new technologies that

have been implemented with the rise of alternative forms of organisation, or simply the stylised account of both systems which makes contrasts easy to draw. Flexible specialisation may only be a variation on the theme of mass production, introducing refinements but not revolutionising industrial organisation. (Rinehart et al, 1997). Perhaps the most important reason why Fordist mass production and flexible specialisation have been presented as opposites has to do with the broader context of economic and social change which has received much more agreement. Whatever the explanation, there are in fact many similarities between these systems and, therefore, industrial change may be defined more by the coexistence of these systems and not transition or rediscovery (Gertler, 1988; Williams et al, 1992).

These debates highlight the need to distinguish between broad societal trends and specific changes to industrial organisation. More important for this study, the fact that apparently opposed production systems share many key similarities leads us to discount any preference for one over another. Aligned with the evolution of industrial organisation have been preferences for this or that system, preferences which have often led to misjudgements about firms and industries. For this reason, housebuilding has been severely, and erroneously, criticised. Still, if the treatment of changing industrial organisation is historically inaccurate, it does have heuristic value for the study of housebuilding. It is in the ways that housebuilding compares with presumed 'best-practice' models on either side of the so-called divide that the industry can be interpreted.

2.3 Housebuilding in Industrial Context[2]

2.3.1 Perspectives on Housebuilding

The housebuilding industry provides an excellent test for the periodisation of industrial organisation. The industry has neither conformed to broad trends in manufacturing, nor has it lived up to the hopes and prescriptions of observers.

In most Western countries, housebuilding is typically undertaken by a large number of diverse firms. Most are small, some are large, and almost all operate at most on a local or regional scale. To this day, much of the work in building a house is done on-site, usually by subcontracted labourers. Since WWII, many advances have been made in building materials but, for the most part, brick and lumber remain standard. Throughout this century, these characteristics have been criticised because they are thought to represent stagnation within the industry. Relative to other goods-producing industries, as well as to other sectors of construction, housebuilding has been described as backward. However, this view is based on an inappropriate definition of what constitutes industrial development, and on presumptions about market conditions and opportunities which vary between industries. Theorists of the regulation school offer a fresh perspective on housebuilding which encourages us to explore and question these assumptions. Their emphasis is on the local circumstances that contribute to the provision of housing, avoiding generalised models of industrial development and market relations into which industries must be fitted. From this perspective, housebuilding

cannot be interpreted on the same bases as, say, manufacturing. Housing production, exchange and consumption are qualitatively different from other consumer goods.

In the early twentieth century, there emerged a view that entrepreneurs had overlooked the construction industry. From social commentators to major planning figures, construction had come to represent the industrial past. Unlike other goods-producing industries, most especially automobile manufacturing, construction was seen as undercapitalised, disorganised, inefficient, and generally 'backward'. Housebuilding bore the brunt of criticism, for it was thought to be the least modern segment of construction. In 1927, Walter Gropius, founder of the influential Bauhaus School of architectural technology, offered a program for solving the 'problem' of housing production. After unfavourably comparing housebuilding with factory-produced goods, Gropius outlined a 21-step plan to modernise the industry. In *The New Architecture*, Gropius generalised these steps as standardisation and rationalisation: house components and design could be reduced to a small number of alternatives and the production process, from planning to assembly, should be routinised. In his view, housing was to correspond "to the technical civilisation of the age we live in..." (1975, 17).

Gropius' views are important because they systematised what many contemporaries believed about housebuilding. Some argued that 'machine-made homes' could pave the road to recovery from the Depression: factory-based producers could efficiently provide adequate housing, address unemployment and make housebuilding more respectable like other segments of the construction industry (Sloan, 1934). In the mid-1940s, most observers continued to make the case for mass production. Although

arguments varied as some debated factory-based prefabrication (Colean, 1944) versus on-site assembly line production (Bauer, 1945), large builders were seen as the answer to the housebuilding problem because they could produce economical standardised products (Colean, 1944; Bauer, 1945).

It is not surprising that this perspective on housebuilding emerged when Fordist production systems were returning major productivity gains. Again, representing the general sentiment on housebuilding, Gropius' (1927, 25, 37) comments in *The New Architecture* are revealing: he argued that the 'irrevocable steps in industrial evolution' involved mechanisation, rationalisation and a specialised division of labour, the latter marking 'the difference between industry and handicraft' production. Gropius echoed the widespread sentiment that production should involve as little manual labour as possible. When unavoidable, manual labour should be routinised and controlled. By the interwar years, Taylorism--the specialised division of labour to insure work task familiarity and efficiency--had become the favoured way of organising workers (Taylor, 1911). Significantly, as Taylor himself argued with an example of bricklaying, a division of labour was seen as the route to industrial development because it replaced 'rule-of-thumb' production with scientific management. Because housebuilding was still thought to rely on 'handicraft' processes governed by 'rule-of-thumb' labour it was seen as 'traditional', and therefore backward.

The influence of such ideas extended to planning visionaries. Following Ebenezer Howard and Frank Lloyd Wright, Clarence Perry (1937) set out his prescription of the Neighbourhood Unit Plan in *Housing for the Machine Age*. Perry argued that low-

density suburban master plans could provide housebuilders with the supply of land needed to achieve economies. As he saw it, poorly organised space thwarted the development of large builders, and hence the standardisation of housebuilding materials and techniques. Like others who acknowledged the spatial fixity of housing, Perry had come to accept the central tenets of Fordist mass production (c.f. Bauer, 1945). With land as a facilitating factor, he argued for on-site assembly of prefabricated components by trained, mobile and efficient workers (Sloan, 1934). Comparing cars and airplanes with houses, "even though they move through space", Perry envisioned housebuilding as the mobile assembly line that catered to the nature of housing as an industrial commodity (Perry, 1937, 188).

The view that housebuilding needed to grow out of its traditional handicraft roots continued after WWII. The context had changed dramatically, even from the interwar years, since mass consumption was becoming widespread, and criticisms of housebuilding were based less on utopian planning ideals and more on economic reality. The postwar housing shortage, exacerbated by a scarcity of building materials and quality labour, focussed attention on housebuilding. The question was, how could efficiencies be achieved in housing as in other industries? Again, the underlying theme was that housebuilding was an industrial problem in search of a solution. Some argued that labour and materials shortages could promote modernisation by inducing efficiency and innovation (Bauer, 1945). For Alfred Sloan (1934), entry into the postwar period presented an 'industrial opportunity' to develop the housebuilding industry. This would entail large firms and integrated production methods. While providing a more nuanced

understanding of the requirements of the housing market, Miles Colean (1944) called for the same kind of industrial development. For others, the industry's continued 'traditional' appearance could be explained in economic terms. The preference for labour-intensive methods made sense compared to the cost-prohibitive investment required for capital investment (Sims, 1966). In other words, the apparent lack of development of construction could be explained by shrewd investment strategies that relied on labour intensive methods. But even if policy-makers could not modernise the industry, the market would certainly bring it about. Sherman Maisel's (1953) classic study *Housebuilding in Transition* predicted that such progress would occur because mass markets would inevitably lead to a shakeout of all but the largest and most efficient players. Here again we see the assumption that all industries would naturally evolve toward the Fordist model of large-scale production.

By default, these remain the dominant perspectives. Some empirical work has been undertaken in recent years but these studies usually perpetuate the same stereotypes and about the industry's relative level of development (CMHC, 1989). Since the 1970s, the literature on housebuilding has tended to focus on the large firms even though they continue to comprise a minority of all builders, to be responsible for a minority of output in Canada and the US, as shown in Chapter 4. The emphasis on large firms is understandable given their integration of land development and housebuilding and the problems associated with land costs and development beginning in the 1970s (Lorimer, 1978). Attention given to the large builder may also signal a belief that this form of industrial organisation had arrived at long last. Whatever the explanation for the focus on

'bigness', the small firm still dominates the industry and for many observers continues to represent stalled development (c.f. CMHC, 1989-2 and 1989-4). A key defining feature of housebuilding, then, is its persistent deconcentration. How does this compare with other industries and how do we explain this form of organisation? The following provides an overview of trends in the changing contours of industrial organisation in terms of firm size structure and transience. This will allow us to place the empirical findings of the thesis in an industrial context when we turn to the research chapters.

2.3.2 Firm Size Structure and Transience

If past research on housebuilding has been critical, this is primarily because of the persistence of the small builder. Relative to other industries, especially those receiving greatest attention in the restructuring literature, housebuilding has remained an activity of small and transient companies. This section provides an historical overview of trends in firm size structure and concludes by offering explanations as to why housebuilding has remained different from the norm.

Over the past century, industrial organisation has been characterised by rising levels of market concentration in selected industries, national economies and global markets. Before World War II, concentration came largely by way of company mergers such that. In the US and UK, the largest 100 industrial companies had come to represent about one-third of all manufacturing output (Prais, 1976). Of course, internal firm growth among expanding industrials like the Ford Motor Company aided in raising concentration to new levels. These trends led Adolf Berle and Gardiner Means (1932,

40-1) to write: "It would take only forty years at the 1909-1929 rates...for all corporate activity and practically all industrial activity to be absorbed by two hundred giant corporations." The postwar golden years seemed to reinforce this trend: conglomerate mergers in the 1960s made the multidivisional firm pre-eminent, as it could reach into diverse geographical and product markets.

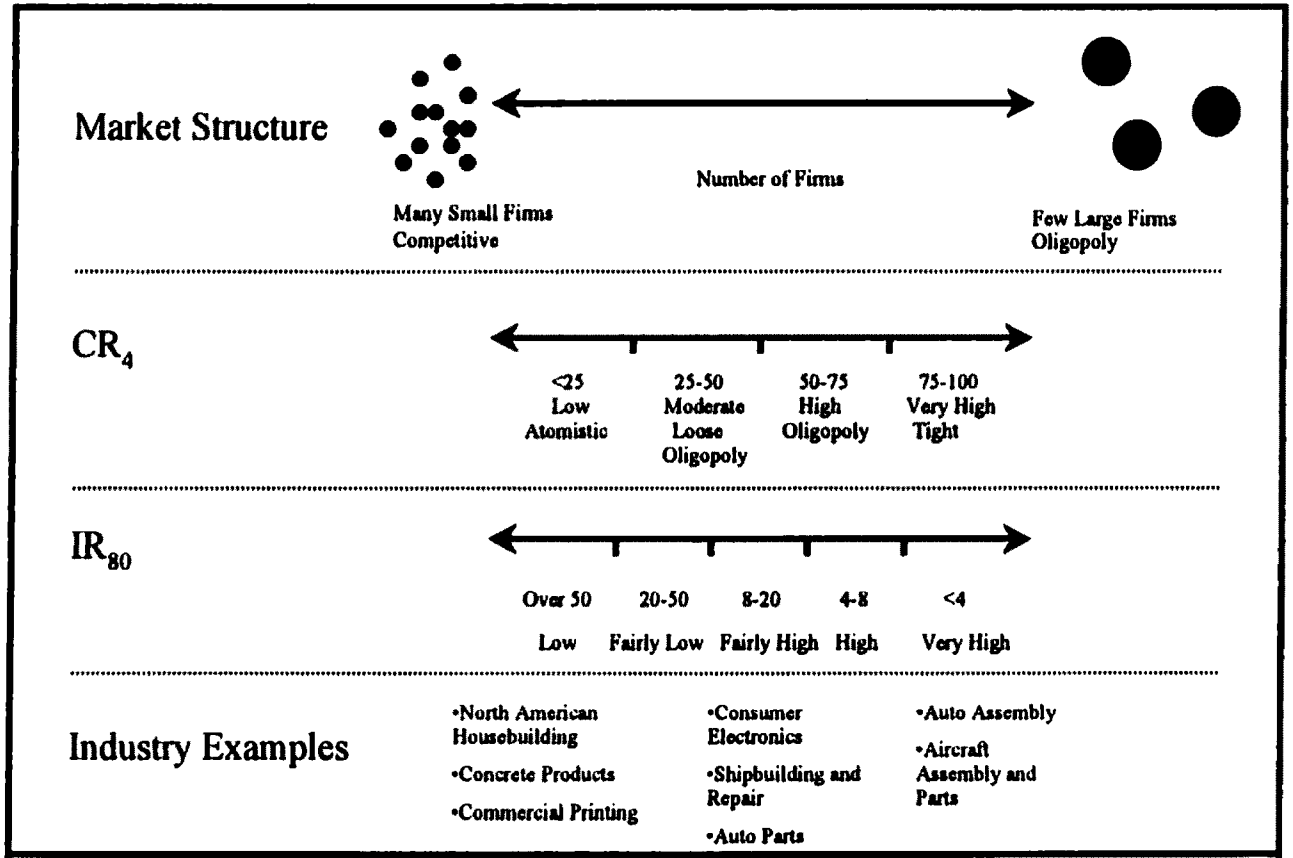
Following Berle and Means (1932), scholars became increasingly aware of the rise of industrial concentration, particularly its historical significance and market implications. For many observers, the postwar decades confirmed that this trend had become a defining feature of industrial capitalism. In the US and UK, the largest industrial companies continued to gain market share and 'national champion' firms came to dominate national and international markets. In Canada, concentration rose into the 1970, indeed to levels higher than those in most other industrialised countries, including the US (Green, 1990; Khemani, 1980). There arose a language to describe industrial concentration and its attendant oligopoly firms: a 'dual economy' of 'centre' and 'periphery' firms (Averitt, 1968); a 'technostructure', or 'planning system' to replace the 'market system' of many competitive economic agents (Galbraith, 1967). Within industrial geography, Taylor and Thrift (1983) offered a programmatic for research based the inter- and intra-industry 'segmentation' of business organisations according to their size. While the latter acknowledged the limits to such generalisation, mid-century observers had begun to join the chorus of praise for large-firm dominance and concentration within industries and national economies. The most influential statement

of this process is Alfred Chandler's *The Visible Hand*, in which he told the story of the advent of large-firm dominance in the United States from 1840 to 1920. He wrote:

> In many sectors of the economy the visible hand of management replaced what Adam Smith referred to as the invisible hand of market forces...As modern business enterprise acquired functions hitherto carried out by the market, it became the most powerful institution in the American economy and its managers the most influential group of economic decision makers. The rise of modern business enterprise in the United States, therefore, brought with it managerial capitalism (Chandler, 1977, 1).

The works of Chandler and others provided valuable insights into the origins and implications of large-firm dominance in selected industries. But industrial concentration has not been the experience of every country or industry. Canada soon became an anomaly, as aggregate concentration diminished after the 1970s and was no greater in the 1990s than in the 1920s and 1930s (Green, 1990). Germany and Japan, while not lacking major multinationals, have been more supportive of smaller firms than the US and UK (Hayter, 1997). Within national economies, the activities usually associated with highest concentration are primary industries, manufacturing and finance. In the US, for example, the addition of foreign auto assemblers after 1970 has not altered the 'tight' market where the leading four firms account for over 90% of all output (Holmes, 1997). This is commonly expressed as a Concentration Ratio of the leading four firms, or CR_4[3]. In most industries, a measure of the leading concerns hides numerous others beneath them which can comprise a significant proportion of total industrial output. Deconcentrated industries include dairying, sawmills and paper mills, and residential construction. These are typically atomistic rather than oligopolistic, with a CR_4 of less than 25% (see Figure

Figure 2.1: Market Structure and Concentration Measures



The CR4 is the proportion of total output in a specific industry produced by the largest four firms.

The IR_{80} indicates the minimum number of firms in a specific industry required to produce 80% of all output.

Industry Examples are primarily Canadian, though the same breakdown would apply elsewhere. See Green, 1990, Chapter 4.

2.1). Between these polar opposites lie a host of industries to produce a gradual transition from deconcentration to oligopoly or monopoly markets. In Canada, mining and manufacturing have produced the largest corporations (Ray, 1996), but 'tight' markets and corporate dominance are not the rule. Canadian manufacturing industries, for example, display the full range of CRs depicted in Figure 2.1 (Green, 1990). Thus, even if national and international markets have become more concentrated, firm size distributions still vary quite widely between countries and industries.

Despite the continued presence of diverse firm size distributions, we are more familiar with the contours of concentrated industries and with the maintenance of their leaders (Roy, 1997; Scherer and Ross, 1990). A host of factors may influence firm growth, and thus the distribution of firm sizes within an industry, including mergers, and internal firm growth and good fortune. At Ford before WWII, internal growth was set in motion by technological innovativeness. The relative influence of each factor varies but given their interplay the competitive process seems to favour large firms: in general, growth rates stabilise with increasing firm size, which results in their greater long-run expansion. Expansion in turn breeds firm persistence which, like size, brings greater long-term growth. The cycle is thus repeated and the net effect is that the range of firm size widens, usually over long periods of time, and leaders rarely relinquish their dominance (Scherer and Ross, 1990). Small firms can occasionally penetrate the top ranks by internal growth, though their growth rates tend to be too variable for sustained market share gains. For example, in Canadian manufacturing in the 1970s, firm sizes experienced a convergence on the mean, whereby large and small firms alike moved

closer to their industry averages (Baldwin, 1998). But, as in concentrated industries, small firms could not challenge for the industry top ranks even though their growth rates were temporarily higher (Ray, 1996).

Given the stability of large industrial firms and their favourable performance, it is not surprising that industrial and aggregate concentration should rise through time. As noted above, growth rates of small firms are often too variable to challenge for top ranks. More often than their larger counterparts, they fail. Industrial concentration persists because larger firms do. Up to 1982, the US Census Bureau collected data on large-firm persistence in manufacturing. These showed that large industrial firms had proven stable over long periods of time (Table 2.1). More than half of the 50 largest manufacturing companies in 1982 had been in the top 50 twenty years earlier. Almost two-fifths had ranked in the top 50 thirty-five years earlier. Large industrials in manufacturing represent stability as well as concentration. In his research on Canadian manufacturing through the 1970s, Baldwin (1998, 118) finds that large firms are "islands of stability" in a sea of turnover. Although large firms can experience unexpectedly high turnover rates, it is their small counterparts that are most transient. Overall, Baldwin finds that manufacturing establishments experienced an annual average turnover of 5.3% for this period. However, what appears to be high turnover in manufacturing is in fact low relative to the construction sector and housebuilding in particular. Ray (1996, 181-2) shows that firm turnover in construction is among the highest of all sectors, while in manufacturing it is among the lowest. The main cause of this difference is each industry's firm size mix. Because small firms are numerically dominant, membership in

TABLE 2.1: Stability of the 50 Largest Industrials in the US, 1947--1982

	Number of the 50 largest companies in 1982 that were among the largest in earlier years							
	1982	1977	1972	1967	1962	1958	1954	1947
1982								
Among 50 Largest	50	37	32	30	28	25	22	18
Among 51st to 100th Largest	-	9	13	11	8	11	13	6
Among 101st to 200th Largest	-	4	5	3	5	5	4	14
Not Among 200 Largest	-	-	-	6	9	9	11	12
Total	50	50	50	50	50	50	50	50

Source: US Bureau of the Census, 1982 Census of Manufacturing, Concentration Ratios in Manufacturing, Table 3.

construction is extremely transient. For this reason, the construction industry contributed an annual average of 14% of all bankruptcies in Canada through the 1990s compared to half that in manufacturing.[4] Failures in construction were second only to those among the many small firms in retailing. If construction firms are transient, then housebuilders -- the smallest and most numerous of the sector - - are even more so.

As noted earlier, the detailed findings of previous researchers, notably regarding firm size and transience, are presented in Chapters 4 and 5. The results support the general trends discussed above. Along with the research findings in this study, other primary and secondary sources show that housebuilding continues to be one of the least concentrated industries (US Bureau of Labor Statistics, 1949; CMHC, 1956; Maisel, 1953; Grebler, 1973; Carroll, 1988). Data on firm transience are even scarcer. If some studies do present data on firm size structure, they fail to do so on firm transience. Other studies on housebuilding in North America fail to present any evidence on either issue (Eichler, 1982; Denowitz, 1982). Still, some sources provide historical depth to the data analysis on firm transience in Ontario to show that housebuilding is indeed an industry of very transient membership, especially among its small companies (Colean and Newcomb, 1952; Maisel, 1953; CMHC 1956, 1971, 1989; Herzog, 1963; Price, 1976, Orazietti, 1977).

If housebuilding is so different the obvious question is why. Past observers have not taken into account the different sorts of constraints faced by the homebuilder which may in turn foster contrasting methods. I therefore conclude this chapter with a discussion of possible explanations as to why housebuilding remains a deconcentrated

industry of small companies, bringing with them 'undercapitalised' production methods and transience.

2.3.3 Explaining the Organisation of Housebuilding

As discussed above, the principal perspectives on the housebuilding industry were developed during the Fordist period of industrial development in which vertical integration, economies of scale and a highly specialised division of labour were defining features. Any firm or industry that did not conform to these features was regarded as underdeveloped and was called upon to invest in these methods. Housebuilding, appearing backward to many, was criticised for its small companies and their handicraft methods. But is it appropriate to expect that all industries conform to a single model of organisation? One of the purposes of this thesis is to explore this question.

Past observers of the housebuilding industry have commonly ignored or downplayed the distinctiveness of its product (Fallis, 1985). Because a house can be built in innumerable configurations, it lasts much longer than most other goods and is fixed in place, it presents specific production constraints. While some house components can be produced in large quantities off site and in the factory, the variety of types of dwellings makes it difficult to standardise parts. Even in a landscape of broadly similar homes, minor differences can present logistical problems in standardising production methods. Added to this is the longevity of housing. On the average, cars are replaced every eight to ten years but houses last several generations. As a result, many fewer homes have to be built annually than is the case for cars, or most other commodities. Finally, the spatial

fixity of the product requires that builders move production from one location to another. The production site is also the site of consumption. Any investment into the sorts of heavy capital used in Fordist production methods would certainly make mobility much more difficult, perhaps infeasible. For this reason, the production of housing on-site has been termed an 'assembly line in reverse' (McKellar, 1993). Of course, there is the possibility that housing might be produced at a central facility and transported. The prefabricated home industry, with its regionalised success in Alberta and southern California, attests to this possibility. Indeed, it speaks to the coexistence of different forms of housing provision, filling an important market niche. But the transportation of large and cumbersome objects limits the range of designs that consumers may buy. Moreover, there is some evidence which suggests that most consumers are unwilling to accept factory-built housing (Needleman, 1965; Perks and Wilton-Clark, 1996). Therefore, the slow market renewal of a heterogeneous product that must be produced at its point of final consumption presents builders with constraints unsuited to Fordist methods.

Since most houses must be assembled on site, the building firm faces a number of additional conditions which influence its organisation and operating methods. The most obvious of these is weather. Adverse weather is no hindrance to the factory, but on the exposed construction site it can stop production. It is therefore wise for the builder to prepare for such expected, but unpredictable, conditions. A basic strategy is to avoid production schedules that depend on a constant flow of activity. Where applicable, seasonal weather changes have the same effect. Some advancements have been made in

materials and methods, such as winter-curable concrete and the staging of construction around the coldest months of the year, but these have had only a marginal influence (McKellar, 1993). Perhaps the most important factor influencing the organisation of housebuilding is the business cycle. The aversion to investment into fixed capital may be best explained by the extent to which it would go underutilised during business downturns. If the nature of underutilisation during a business slowdown is like that for weather changes, its impact is far greater. The housebuilding industry, like the construction sector generally, is more cyclical than most other activities (Berman and Pfleeger, 1997; Kandil, 1997; Petersen and Strongin, 1996). This has long been a policy concern and efforts at improvement have had limited impact (Colean and Newcomb, 1953; ECC, 1974; CMHC, 1989). Whether pro- or counter-cyclical, downturns in housebuilding come often and are severe. Overcapacity is seriously punished. Together with the nature of the product, it is easy to understand why builders avoid investment into capital intensive methods, including vertical integration and the economies of scale required to sustain it.

Without a full appreciation of these constraints, it has been easy for some to dismiss the industry as backward. However, some writers have appreciated that modernisation in housebuilding must look different than in other industries. Some have called for a program of partial, off-site prefabrication (Bauer, 1945; Colean, 1944). In fact, housebuilding in North America has come to rely heavily on partial prefabrication, coupled with on-site assembly. Perhaps the most meaningful, if indirect, statement on the place of housebuilding in industrial development is found in Alfred Chandler's *Scale and*

Scope (1990): Usually misunderstood to represent the history of all business enterprise and industrial development, Chandler's account is more nuanced. His is an account of the rise the modern industrial enterprise, the first movers of new products or greatly improved ones that invested into scale production, marketing and management. But he argues that technology did not give certain firms a competitive advantage, nor did it impose a barrier to firm entry. In some cases, large firm size could be a competitive disadvantage because it slowed market responsiveness. In such cases, competitive advantages are not necessarily found in scale and standardisation but in scope economies and variety. Although housebuilding receives no mention in *Scale and Scope*, the argument applies. Chandler's argument is that alternative forms of industrial organisation can coexist. Firm size, technologies, and techniques are not necessarily indicators of relative development.

How, then, are we to understand the industrial organisation of housebuilding, or any industry for that matter? Might it be most useful to begin by considering the nature of the product and the context of its production as argued above? Philip Scranton (1983) argues that firms must continually confront an 'accumulation matrix' - - varying social and economic forces which give rise to alternative forms of industrial organisation at a point in time. Firm scale and form of organisation are subject to historical contingencies which lead to alternative pathways to development. Thus, as Scranton shows in his own empirical work, not only may alternative forms of industrial organisation co-exist but they vary through time and across space (c.f. Hiebert, 1990; Lewis, 1994). We should not assume that all industries will conform to a single path of development. Moreover,

the inclusion of different activities quickly complicates any attempt to periodise industrial change. For example, according to Lowe and Wrigley (1996), many of the features of flexible specialisation had appeared in retailing in the 1960s. Tracing the historical lineaments to determine which industries 'developed' first is therefore misguided. Each faces its own locally embedded circumstances giving rise to spatial and temporal variations in industrial organisation (Granovetter, 1985). Marked by its own evolutionary, rather than revolutionary, change the study of housebuilding must begin with an understanding of its own firms' historically contingent, path dependent conditions (Doucet and Weaver, 1991).

In the literature on housebuilding, Michael Ball (1988) has been the strongest proponent of this perspective. Writing about the British construction industry, Ball argues that the industry cannot be held up to some presumed end state of development. Like Scranton, he argues that the construction industry must be understood within its own 'local structures of provision'. While acknowledging that the British construction industry has not performed as well as might be expected, comparisons across industries with different market and technological demands are inappropriate. The general lack of research on housebuilding in North America has meant that Ball's notion of local structures of provision has not been applied here as it has in other countries (Greig, 1996). However, some North American observers have written about the nature of the housebuilding firm in ways compatible with Ball's work. Stinchcombe (1959) has pointed out the craft-administrative nature of entrepreneurial builders, arguing that differences with bureaucratic administration are matters of degree and not of type.

Acknowledging the decentralised social system of housebuilding in North America, Eccles (1981a, 1981b) has described housebuilders as 'quasi-firms', a term analogous to the 'virtual firm' in the recent industrial literature noted earlier.

Building on these arguments and concepts, this thesis uses a case study of housebuilding in postwar Ontario to suggest a reinterpretation of North American housebuilding. It begins with the understanding that industries do not conform to a predetermined end state of development and recognises that alternative forms of industrial organisation may co-exist, varying though time and across space. As such, long-standing judgements about the relatively impoverished state of housebuilding firms and methods are questioned. Case studies of firm size structure, internal firm organisation and operation supply the basis on which such a reinterpretation will be based.

Notes

[1] This term can have two related but quite distinct meanings. Fordism can refer to a historical period or economic organisation extending roughly from 1900 to 1970, as described in this section. On the other hand, Fordism can also refer to the technical organisation of production in manufacturing activity, as described in the following section.

[2] Because the empirical literature on housebuilding is small, I present its main lineaments in chapters 4 and 5 along with findings from published primary sources and the principal database used in this study. Here I present the main perspectives on housebuilding. These constitute the majority of the literature on the industry, usually unaccompanied by empirical evidence.

[3] A typical measure of industrial concentration. This and other measures are used in this study. See Figure 2.1, and Curry and George (1983) for an overview of measures of industrial concentration.

[4] As discussed in chapter 5, bankruptcy data on construction firms are problematic because they count only firm failure by insolvency and exclude firm failure for other reasons. In fact, formal bankruptcy data represent a minority of all construction failures (ECC, 1974, 198-19).

Chapter 3: Sources and Methods

In order to analyse and interpret the housebuilding industry in Canada after W.W.II, I used a variety of sources and methods. These enabled me to address a number of limitations in prior research on housebuilding, especially in the Canadian context. These problems are the general paucity of evidence and the misinterpretations that have resulted. Specifically, the sources used help me to examine the industry's firm size structure, firm structure and operating methods.

This research is based primarily on one quantitative data set, and two qualitative sources. First, in Chapters 4 and 5, data obtained from the Ontario New Home Warranty Program (ONHWP) are used to document the changing firm size structure of the housebuilding industry in Ontario from 1978 to 1998. Second, interviews with a sample of builders in the Toronto region are presented in Chapter 6 to complement the statistical findings. The evidence of the interviews is used to address issues concerning the industry's firm size structure, builders' production methods, and their business strategies. Before I made use of these sources, I consulted the two main industry trade journals, the National Builder and Canadian Builder. This was done first to inform my subsequent inquiry into the data and interviews. The trade journal material is presented throughout the thesis, interwoven with statistical evidence in chapters 4 and 5 and the interviews in chapter 6.

Previous researchers have also used a combination of quantitative and qualitative sources, but infrequently. Maisel's (1953) work combined published secondary data and extensive surveys and interviews. Grebler (1973) combined data on publicly traded builder-developers with in-depth corporate interviews. Willis' (1979) international comparative work also made use of quantitative data and interviews with builders. However, as noted earlier, research on the industry waned after the 1970s and recent work has either presented strictly qualitative sources (Denowitz, 1982; Eichler, 1982) or has relied on limited secondary sources for quantitative data (CMHC, 1989). Carroll's (1988, 1998) research is a recent exception, combining focus groups with builders with a selection of the same quantitative data used in this study, covering the period 1978 through 1984 for Ontario. In terms of the industry's size structure, this thesis builds on her work by extending the time period to the present. The strength of combining quantitative and qualitative sources are the possibilities for triangulation. The ONHWP data reveal the industry's firm size structure. The interviews help us understand the processes beneath the numbers and to develop explanations as to why the industry structure exists as it is, and why it might change through time. Industry trade journals offer broader insights into this understudied industry, doing so at the national scale for much of the postwar period. In the remainder of this chapter, I describe these sources and my methods in using them.

3.1 Trade Journals

Trade journals provide a general sense of the organisation and operation of housebuilding in Canada in the postwar period. They also suggest how the character of the industry has varied from region to region, and how insiders understood their own industry. Two trade journals were examined: National Builder and Canadian Builder.[1] These helped me frame the context of Canadian housebuilding, especially in relation to the literature on industrial organisation, and to inform my approach to the Ontario and Toronto cases. Begun in 1952, the National Builder was the official journal of the National House Builders' Association. It was published up to 1962, when it was absorbed by Canadian Builder (1953 to 1992). These two journals are national in scope and cover most of the postwar period.

I scanned every issue of both journals and constructed an index of pertinent material. The main category of information that I excluded was advertising. I catalogued the remainder by subject headings, which I classed under six general categories (Table 3.1): 1. *Size Composition/Concentration* summarises information on the industry's firm size structure; 2. *Integration/Diversification* relates to firms' strategies and activities in related and unrelated markets; 3. *Construction Market* refers to demand issues and state intervention; 4. *Methods/Techniques* includes material on builders' operations and proposed new methods, and their supposed efficiency; 5. *Multi-city Builders/Internationalisation* refers to multi-market builders and trade and investment in construction services; 6. *Theoretical* includes a collection of material of theoretical significance. I also cross-classified this material by geographical location. References to

Table 3.1: Subjects and Categories Used in the Collection of Information from *Canadian Builder* and *National Builder*, 1953-1992

Subject*	Size Composition/ Concentration	Integration/ Diversification	Construction Market
Categories	Small Builders Large Builder Problem Builders Land Development Size Composition/Conc. Speculation/Custom Building Management Labour	Integration Diversification Flexibility Specialisation Renovation Collaboration	State Finance Lumber Dealers Materials Market Seasonal Building/Cycles
Subject*	**Methods/ Techniques**	**Multi-city Builders/ Internationalization**	**Theoretical**
Categories	Efficiency in Existing Methods Proposed/New Methods Volume/Flow of Work Mass Building Standardisation Prefabrication Industrialisation Warehousing Sub-contracting In-house Labour Merchandising/Marketing Business/Professionalisation Research	Tech. from Abroad Markets/tech Abroad N.A. versus Euro Differences Foreign Direct Investment Canadian Direct Investment Canadian Multi-market Builders	Construction/Fordism Modernism Gender/Ethnicity Architecture/ Design Urban Form Comparisons.w other Industries Relationship with War/Defense

*For further definition of the subjects used, see the text.

other industry-related sources of information, such as industry studies and books, were also recorded. The index thus represents a comprehensive catalogue for these subjects and categories in Canada's principal housebuilding trade journals.

From this index, I derived two classes of information. The first pertained to opinions on builders and their industry. These usually came from editorials, commentaries, and articles which expressed views about the industry, often in relation to issues such as government intervention. The second class of information was more factual, containing studies and reports on firm and industry organisation, sometimes collected by the journal and at other times by agencies such as Dun and Bradstreet. Together, these two classes of information offer a picture of how Canadian housebuilding changed throughout the postwar period, and varied from region to region. This was an important backdrop for the Ontario and Toronto cases.[2]

While trade journals can provide useful insights, they should be used with caution. A journal may represent only a segment of an industry, or promote a certain form of organisation based on the preferences of its editor or advertisers. In the case of National Builder and especially Canadian Builder many biases were apparent. Though these journals were national in scope, Ontario received most coverage in terms of stories, articles and editorials, which could skew the national picture. Large-scale builders were promoted, implicitly and explicitly, over small firms, especially before the 1980s. Greater mechanisation was promoted for the industry's development--something large firms were better able to attempt, thereby also supporting large-scale builders. These kinds of biases are more likely to appear in the 'opinion'-oriented material described

above, but they may also appear in more factual, journalistic-type reporting based on decisions about what to report, and how it may be represented. Thus, trade journals can have limitations in their scope of coverage which must be taken into account.

3.2 Quantitative Data on the Housebuilding Industry in Ontario

Scope and Purpose

If the strength of the trade journals is to provide broad themes, the empirical evidence that they contain is largely anecdotal. The main data used in this study address this limitation, as they constitute a census of builders in the Province of Ontario from 1978 through 1998.

The data were obtained from the Ontario New Home Warranty Program (ONHWP). The ONHWP was legislated into existence by the Province of Ontario in 1976, requiring that all new housing units and their builders be registered. Rather than being run by the Province of Ontario, the Warranty Program has always been run by the building industry through financial membership fees charged to all builders. The initial push for the program came from builders who wanted to allay consumers' concerns regarding the quality of their products. The administrators of the program enforce building standards, offer consumer protection, and collect data on builders. Those data used here pertain to the builders of all types of single-family housing: single- and semi-detached houses, row houses and low-rise condominium tenure houses built for sale.

Builders are defined as vendors who erect houses for the purpose of sale, on speculation or contract, to another party. Individuals who build homes for themselves,

acting as their own general contractor, for example, are not defined as vendors and are not required to register with the ONHWP. However individuals who do not initially register with the program, but who build and subsequently sell a new home, are supposedly traced by the ONHWP and included as vendors. Currently, this is done by a team of nine investigators who trace building permits issued by municipal building departments. The data therefore exclude owner-builders: this is an important point since many firms build one house a year, and should not be mistaken for owner-builders. The data are therefore a fairly comprehensive catalogue of firms constructing low rise single family housing in Ontario from 1978 though 1998. The number of firms active in each year ranged from 1,885 in 1983 to 4,486 in 1986. A total of no fewer than 19,671 different firms were active in Ontario at some time during the study period.

The data were used to examine the changing firm size structure of the housebuilding industry in Ontario from 1978 through 1998. They identify builders and their units on an annual basis, allowing an examination of the industry's structure from year to year.[3] The identification of individual builders also allows for the examination of the dynamics of structural change, in particular the changing scale of builders' operations, the entry of new builders into the industry, and the exit/withdrawal of existing companies.[4]

The method of data collection and maintenance by the ONHWP raises a number of issues. One problem with the data is that firms are identified by registration numbers, which refer to construction projects, rather than to the firms themselves. Since firms can build in two or more locations in a year, a builder may register more than one

identification number. Moreover, each company might appear as a separate corporate entity. Indeed, this was common. The ONHWP attempts to rectify this possible source of confusion by aggregating related corporate entities into a single firm. This is done by use of corporate and/or proprietor information, which the program maintains as part of its role in enforcing industry standards. Since multiple construction sites and corporate entities tend to characterise the large firms, this makes the program's task of aggregation simpler because these builders are easily identifiable in corporate/proprietor information. The net effect is that the number of builders is likely to be very accurate.[5]

A second problem relates to the difficulty of identifying mergers, acquisitions and joint ventures through time. These can be missed since 'combines' are not systematically traced by the ONHWP. In terms of firm numbers, and industry concentration levels, the impact is probably minimal: no new large builders suddenly appear in Ontario from one year to the next.

Methods

The ONHWP data were analysed using statistics employed in prior research on housebuilding and in industrial organisation. The first consideration relates to the definition of the scope of the industry and measures of firm size structure. Firms and industries are defined by the product markets they serve. In this case, the focus is 'bricks and mortar' housebuilders constructing low-rise single-family housing. This leads to the choice of measure of firm size. Alternative measures may be used, such as number of employees, volume of sales and production volume (Curry and George, 1983). Prior

research on housebuilding has used production volume most often, particularly the number of housing units completed, as a proxy for builder size. The data employed in this study are also based on this criterion. This is the most meaningful measure because employment figures can miss subcontracted work while data on dollar volume are difficult to standardise through time and across space.

This leads to a consideration of how to characterise the industry's firm size distribution, and therefore how to rank housebuilders based on their output volume. Given that these data are quite comprehensive, the first step was to examine the firm size distribution for clustering. None was found: the distribution is consistently unimodal and positively skewed towards small builders.[6] Following the example of previous research, I characterised the distribution of builders using class intervals. I used Carroll's (1988, 1998) size classes for several reasons: she chose to build on size classifications used in other studies, but refined them to reflect operational differences between builders of different sizes. Carroll determined these breaks by conducting focus groups with builders to ask what they believed to be important differences in company sizes. She started with size classes too coarse according to builders, but the focus groups aided in refinements and these have been adopted here with only one change. Rather than using classes of '<3 units' and '4-10 units', I have divided builders of one through ten units into two groups, one-house builders, and two through ten.[7] This has the effect of separating out the smallest, one-house builders which, on the average, make up one-third of all builders and over three percent of all output.

To complement the firm size classes, I also made use of common measures of firm size structure, namely the Concentration Ratio (CR) and the Inverse Concentration Ratio (IR) (see Figure 2a). The CR measures the proportion of output constituted by a given number of firms. At aggregate national scales, the CR is used to describe the relative dominance of an economy or market by a given number of firms. Thus, the CR_{100} measures the concentration of economic activity among the largest 100 firms. Within industries, the leading four or eight firms are usually described in CR_4 and CR_8, respectively. To balance this, the IR measures the number of firms required for a given proportion of output, such as 50% or 80%; thus the IR_{50} and IR_{80}. Unlike firm size classes, these sorts of measures are seldom used in research on housebuilding. My principal use of these measures is to place housebuilding in a broader industrial context.

In contrast to measures of concentration and firm size classes, the methods used to examine structural change are not as straightforward. This is especially true in terms of firm presence--defined as at least one house completion in a given year--or absence. The data allow for builders to be tracked through time, which is important in measuring their changing output levels. But the measurement of new firm entry and exits, as distinct from temporary withdrawal and re-entry, requires estimation.[8] The ONHWP maintains every builder's registration number active in its records, whether it is active in any particular year. For this reason, the data do not distinguish between entry and exit, on the one hand, and withdrawal and re-entry, on the other. The distinction is important in the analysis of firm transience. A builder with no completions in a given year might have temporarily withdrawn or have experienced a permanent business failure. All that is apparent from

the data is that no housing units were completed in a given year. For example, a firm which constructed one house in 1978, but none since, is identified by a number which does not indicate whether the company has permanently left or withdrawn. We might infer that a builder which has been inactive for several years has probably failed. But such is not the case: builders can display quite long withdrawal periods and not have left the industry permanently. This feature is shown in Table 3.2.

To overcome this problem, a time threshold has been used to estimate the difference between builders' permanent versus temporary status change. As shown in Table 3.2, there is little difference in the proportion of firms returning to the industry after five years, versus ten years, or even longer. For example, 854 firms present in 1978 had exited in 1979, though 411 returned by 1983. Of the remaining 443 builders, only 15 more had returned by 1988; only 24 more by 1998. This example is representative of the pattern in subsequent years, indicating that a five year period is a plausible time threshold to differentiate temporary and permanent status changes among builders. Use of a five year threshold limits the measurement of entry to a start year of 1983, to ensure that re-entrants present before 1978 are not included as new firm entrants. Similarly, the measurement of exits is limited up to 1993 to avoid the inclusion of firms that may have temporarily withdrawn after that time and not returned until after 1998. Between 1983 and 1993, then, permanent and temporary status changes are delimited by a five year threshold. While this captures most of the difference, it must be stressed that this threshold avails itself to estimates only, especially in light of the maximum withdrawal periods that some builders display.[9]

Table 3.2: Estimates of Time Thresholds for Firm Turnover in Housebuilding, Ontario 1978-1998

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Total Firms	3105	3449	2434	3126	2507	1895	2067	2411	3107	3593	4247
No. of Firms Leaving	854	1635	909	1694	1444	653	647	669	1066	1139	1557
Maximum Withdrawal Period*	16	14	16	9	8	13	11	11**	-	-	-
No. re-entered by 1998	435	819	398	329	212	242	249	212	316	263	328
Proportion Re-entered by 1998	50.9	50.1	43.8	19.4	14.7	37.1	38.5	31.7	29.6	23.1	21.1
Re-entered Within 10 Years	426	813	392	329	212	242	247	211	314	262	328
Proportion of Re-entered Within 10 Years	49.9	49.7	43.1	19.4	14.7	37.1	38.2	31.5	29.5	23.0	21.1
Re-entered within 5 Years	411	798	370	304	189	229	234	195	294	239	300
Proportion of Re-entered Within 5 Years	48.1	48.8	40.7	17.9	13.1	35.1	36.2	29.1	27.6	21.0	19.3

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total Firms	4486	4190	2885	3027	3071	3132	2905	2827	2938	2882
No. of Firms Leaving	1799	2154	1046	1032	1016	1093	960	836	936	-
Maximum Withdrawal Period*	-	-	-	-	-	-	-	-	-	-
No. re-entered by 1998	367	610	283	305	268	-	-	-	-	-
Proportion Re-entered by 1998	20.4	28.3	27.1	29.6	26.4	-	-	-	-	-
No. re-entered Within 10 Years	-	-	-	-	-	-	-	-	-	-
Proportion of Re-entered Within 10 Years	-	-	-	-	-	-	-	-	-	-
No. re-entered within 5 Years	346	561	271	292	268	-	-	-	-	-
Proportion of Re-entered Within 5 Years	19.2	26.0	25.9	28.3	26.4	-	-	-	-	-

Source: Based on calculations of Ontario New Home Warranty Program Data

*Defined as the number of years at least one firm spent dormant, before returning to build again.
**The maximum withdrawal period cannot be calculated beyond 1985 because the data terminate in 1998.

3.3 Interviews[10]

Purpose

Though comprehensive, the ONHWP data are limited in what they can tell us about firms' internal organisation, operating methods and strategies. Information of this sort would help us understand why housebuilding is decentralised and why builders are transient. To address these issues, I conducted twenty structured interviews with selected builders in the Toronto region. These interviews offer insights into the conduct of a selection of companies.

Although interviews have become a standard method in industrial geography and allied disciplines, they are rare among studies of housebuilding. Because of this, we know little about the organisation and operation of housebuilding companies. Company organisation and the production process, though often theorised, remains very much a 'black box'. Similarly, we know little about the different sorts of corporate and competitive strategies that housebuilders deploy, and more fundamentally, what their goals are. Industry observers have often proffered their own thoughts on these issues, and on the state of housebuilding as a whole. The perceptions of the builders themselves are conspicuous by their absence.

Sampling Design and Interviews

Interviews were conducted with builders located in the Toronto region in the Spring of 2000, which was a buoyant time in the housing market and the economy more generally. Toronto serves as a manageable locale in which to examine the organisation,

operation and strategies of builders operating in the Ontario context, much as the Ontario case is used to represent the Canadian experience in Chapters 4 and 5.

The interview schedule, included here as Appendix 1, is based on questionnaire surveys used in previous research on housebuilding (Maisel, 1953; CMHC, 1971). Maisel (1953) administered surveys which included groups of questions relating to firm organisation and operations, such as; 'Classification', the number and types of dwellings as I have in Section 1; 'Organisation of Production', integration and organisation of work crews as I have in Section 2. But to address persistent questions about the industry's supposed underdevelopment, I made use of questions which follow from insights in more recent research in industrial geography and allied disciplines. For instance, small firms have been a common site of scorn for housebuilding, especially among proponents of scale and integration like those in the trade journals noted earlier. Yet, we know little about small builders' competitive strategies. For this reason, I asked "Are you trying to become a major player...?" in Section 2, #7 of the interview. The answers given to this question shed light on the strategies of builders of all sizes, particularly whether small firms intend to grow or choose to remain small. To address a basic issue in industrial organisation, in Section 4 #1 I asked: "Is it easy to become a housebuilder/enter the industry?" Here too, builders' answers speak to the structure of the industry and to the prevalence of small builders.

The interview schedule is composed of four sections: (1) Firm Classification/Background. (2) Firm Strategy, Organisation and Management. (3) Production Methods. (4) General Industry Perception. In a pre-test, I administered the

interview to three builders--one small, one medium and one large. As a result of the test, I made minor adjustments to the interview structure, partly by re-organising the placement of questions. The main change was in the addition and removal of questions. I added questions 28-31 in Section 2 to gather basic information on marketing, and questions 2 and 4 in Section 4 for builders' perceptions about industry structure and building operations. I removed a question on 'speculative versus custom building' in Section 3 because it largely repeated question #7 in Section 1. I also removed a question on 'constraints and opportunities' available to builders in Section 4, which was difficult to simplify into a workable question without elaborating significantly. In the end, I concluded that it would add little to the main issues and removed it.

Question #7 of Section 1 serves as the starting point for the analysis, and asks: "What is the number of houses your company completes in the average year?" Builders could then be categorised according to the firm size classes used in the data analysis. The remainder of Section 1 is used to further classify builders according to their housing sub-markets, degree of diversification, integration, and specialisation, and to begin to address issues of structure and strategy.

Building on the classification of each builder, the purpose of Section 2 is to understand the connection between builders' corporate and competitive strategies and how they organise and operate their companies. Questions in this section centre on a number of themes: strategic questions on the kinds of activities they choose to engage, their short- and long-term output intentions, housing sub-markets, the organisation of production, land, labour and financing inputs, and marketing.

Section 3 addresses builders' production methods more directly. Building on the themes of Section 2, the purpose here was to get a sense of how builders coordinate and carry out their operations. I also asked questions relating to constrains which may impinge on builders' operations, such as varying construction methods for different sorts of housing and geographic immobility.

Section 4 rounds out the interview with broad questions on builders' perceptions of their industry. The purpose here was to determine whether, at least in perception, informants agree with some observers' views that builders operate 'by the seat of their pants'; that strategy and organisation are planned on the 'back of an envelope'; and, more generally, that housebuilding is underdeveloped.

In selecting builders for interview, I followed a stratified random sampling method, where the aim was to obtain an equal number of interviews for builders of different size classes as defined above. It was important to obtain a minimum number of interviews with builders in each size class, and a pure random sample would probably not have yielded enough of the few, large builders. Builders were selected from Home Buyer's Guide to After Sales and Service, 1999, a publication of the ONHWP.[11] The Guide is the only comprehensive directory of all housebuilders in Ontario. It identifies builders active in the province at any time in the three years leading up to and including 1998. Builder listings identify, among other things, the location of the company's (head) office, the tenure of the company's registration with the ONHWP, and the scale of its operations. The former two were used as filtering criteria to narrow the selection of

potential companies, and the latter was the criterion used to determine which companies could be contacted.

I identified Toronto-area builders from the Buyer's Guide, and this yielded a total of 731.[12] I then selected builders that had been in operation for several years, in preference to recently established companies. Builders listed as recently joining the ONHWP are, by definition, 'entrants' in the industry. Companies like these are less experienced, and less likely to provide insights into industry norms. For this reason, I began the selection process by contacting builders that had first registered with the ONHWP before 1980. This group was composed of fifty-five, from which I was able to obtain sixteen interviews. This left four interviews with companies less than twenty years of age, all of which were established during the 1980s and none in the 1990s (Table 3.3).

Having identified long-time Toronto area builders, I then sought to obtain a similar number of interviews with builders in each size class. I completed seven interviews with small builders, five with medium-sized builders, and the remaining eight with large firms (Table 3.3). In Chapter 5, interviewed builders are referred to according to their size class, and the order in which they were interviewed. Small builders are labelled S1 through S7; medium as M1 through M5 and large as L1 through L8. I was prepared to undertake more than twenty interviews if it became clear that builders operated in different ways. The high degree of consistency that emerged, however, made this unnecessary. In sum, I interviewed established Toronto-areas firms of all sizes.

Table 3.3: A Comparison of Builders in the Toronto CMA in 1998 and Those Interviewed, by Firm Size and Date of Entry

Toronto CMA** Builders

	Date of Entry into Housing Market	Pre-1980	1980-1984	1985-1989	1990-1994	1995-1998	TOTAL (#)	TOTAL (%)
Size Class*	Small	20	27	85	99	249	480	65.7
	Medium	18	12	41	52	59	182	24.9
	Large	17	6	25	17	4	69	9.4
	TOTAL	55	45	151	168	312	731	100

Source: Ontario New Home Warranty Program

Interview Sample by Size and Age***

	Date of Entry into Housing Market	Pre-1980	1980-1984	1985-1989	1990-1994	1995-1998	TOTAL (#)	TOTAL (%)
Size Class	Small	5	1	1	0	0	7	35.0
	Medium	4	0	1	0	0	5	25.0
	Large	7	1	0	0	0	8	40.0
	TOTAL	16	2	2	0	0	20	100

Source: Interviews

*Small refers to builders constructing 25 houses or less per year; Medium 26 though 100 units; Large more than 100 units.
**There were actually 894 builders in Toronto in 1998, but not all could be identified prior to interviewing. See note 10 in the text.

Taken together, these quantitative and qualitative sources allowed me to examine different aspects of housebuilding that have either been understudied or misrepresented in the literature. Industry trade journals provided a necessary frame in which I could then develop my analysis of the data and interviews. My use of quantitative and qualitative sources complement each other in the kinds of issues they represent, particularly relating to our understanding of firm size structure in the industry.

Notes

[1] Canadian Builder changed its title over the course of the postwar decades, becoming Canadian Building in 1969 and Building in 1991. Also, Building Development Magazine merged with Canadian Building in 1972, which then spawned Renovation in 1986.

[2] It should be noted that the trade journals were not analysed using a formal content analysis. Rather, these subjects and categories were constructed to facilitate the use of the journals so as to be able to access relevant information on specific topics.

[3] Builders are identified by a Registration Number. Company names are concealed for confidentiality.

[4] Builders and their units are the primary concern, though the data include more detailed information as well. Also included are the locations of both builders and their projects. The home municipality of each builder is provided, as is the municipality and postal code of each of their projects/houses.

[5] It must be noted that the data are unlikely to be comprehensively accurate. Without access to the program's original data files, it is impossible to know whether its reporting methods have changed over the twenty year period, nor if their standards have changed. Still, given the ONHWP's closeness to the industry, and that the data come from this single source, they are reasonably accurate.

[6] I also divided builders into intervals of five units, such as one through five, six through ten, and so on up to 150 units, and checked for interval clusters. Here again, none was found--it was also a smooth transition from smallest to largest.

[7] Carroll eliminated one-house builders from her data of ONHWP builders to avoid counting 'personal-builders' in the commercial construction industry. This resulted in her use of '<3 units' as a size class. In the data set used here, owner-builders were filtered out, as mentioned, making one-house builders 'vendors', or commercial builders, of new homes for sale. Thus, the size classes used are: small builders, 1-25 units per annum; medium, 26-100; large, greater than 100. In Chapter 4, I subdivide some of these classifications further. Note that in much earlier work on housebuilding, 'large builders' are defined as those completing more than 100 houses per year, whereas Carroll classes these as 'medium', and 'large' as >200. For comparison with earlier studies, I present both classifications in the subsequent empirical section, but label as large those producing more than 100 units per year.

[8] Entry and exit refer to the new formation of a company, or its permanent removal from housebuilding, respectively. These contrast with my use of the terms of withdrawal and re-entry, which refer to a company's temporary absence and return to the industry.

[9] It should also be noted that firm exits are assumed to represent failures. While most firms permanently leaving the industry can be assumed to have likely failed due to bankruptcy, there is also the possibility that some builders voluntarily exit the industry permanently.

Notes

[10] For this component of my research, I obtained approval to conduct interviews from McMaster University's Research Ethics Board.

[11] The Guide cannot be linked to the time series data described in the previous section, also supplied by the ONHWP. Builders identified in the Guide are not, and could not be, identified in the data, under agreement with the ONHWP.

[12] Note that there were actually 894 builders located in the Toronto CMA in 1998 according to ONHWP data, rather than 731 shown in the Buyer's Guide. This discrepancy is attributed to incomplete/inaccurate addresses given in the Guide. Thus, the omitted builders cannot be dated, again because builders in the data are not identified by name. In Chapter 6, I discuss the size structure of interviewed firms in relation to all 894 Toronto CMA builders and remaining Ontario builders in 1998.

Chapter 4: Firm Size Structure in North American Housebuilding

In it's inaugural issue (March 1951), Canadian Builder articulated what would be its opinion about housebuilders for decades to come. In an article entitled "Mass Building Methods"[1], readers were told of the need to overcome the lack of standardisation, prefabrication and time-study analysis. If these limitations were overcome, it was argued, builders could produce a larger volume of homes, and the industry would see the rise of the preferred large housebuilding firm. Indeed, the industry seemed to be 'maturing' in that direction; the industry matured during the 1950s at the very time that the country faced a sever housing shortage. Scale and integration were common themes at the time, and there was no shortage of industry observers who assumed that both reflected progress. However, while promoting large-scale production, this article also advocated more efficient use of trade contracting as the means—a production method regarded, then as now, as counter to the logic of vertical integration. On this point, the article noted that there is no reason why the small building company could not be a large-scale producer.

In this article, and in others for decades to come, the Canadian Builder grudgingly recognised that the small builder could, and would, remain a fixture in housebuilding alongside large-scale producers. The purpose of this chapter is to document and analyse the firm size structure of the housebuilding industry in North America since W.W.II. The trade journals made constant reference to small builders, rarely favourably. But even the

asides are sparse. The Canadian Builder did not assemble from published and unpublished sources data on the firm size structure of housebuilding. This chapter will provide such a synthesis of such data, build on these with the case of Ontario, and serve as the basis for subsequent chapters which will look at the dynamics of industry change in Ontario and Toronto. Ultimately, the objective is to explain why the small builder remains a defining feature of housebuilding in Canada.

4.1 North American Housebuilding Since World War Two

Internationally, the housebuilding industry varies considerably in firm size structure. In Britain, for example, the industry is typically more concentrated than in North America, though still much less so than in other activities such as manufacturing. In 1976, only 0.9% of firms produced more than 250 units each, yet they produced 38% of all new housing output (Ball, 1988). However, more than one-third of all units were produced by builders of no more than 50 dwellings. These statistics would combine to produce a 'low' IR, as depicted in Figure 2.1, and large builders alone would surely produce a 'low' CR. Employment figures indicate that the British construction industry as a whole became less concentrated into the 1980s, though housebuilding became more concentrated into the 1990s (Ball, 1988, 117; Nicol and Hooper, 1999). Housebuilding in Britain and Europe is more concentrated than in North America because of the use of more capital intensive building methods, requiring large-firm resources and greater reliance on large-scale state contracts. This explains why, in places like Australia, housebuilding is more like it is in North America, where smaller firms are better

represented. Still, British housebuilding is far less concentrated than attention-grabbing oligopolistic manufacturing activities.

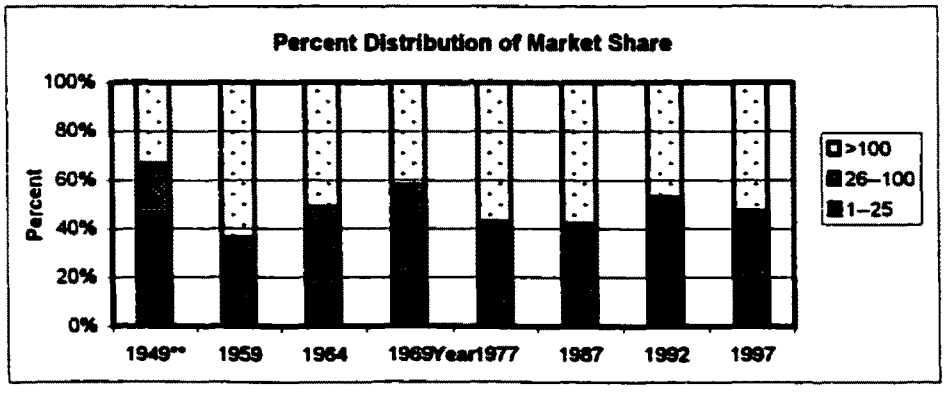
North American housebuilding is even less concentrated. In the US, housebuilding entered the postwar period much as it had left off in the 1930s; builders of fewer than 25 units per year dominated, both in numbers and market share (Colean, 1944; Colean and Newcomb, 1952). The US Bureau of Labor Statistics conducted several surveys of the housebuilding industry, each confirming this persistent firm size structure: in 1949, for example, 90% of all commercial builders started fewer than ten units; 42% just one (Table 4.1). In contrast, large builders of more than 100 units each contributed about the same output--roughly one third of all units--but only made up one percent of all builders. Based on a sample of firms belonging to the National Association of Home Builders (NAHB), it appears that the American housebuilding industry retained this pattern for the next two decades.[2] The large builder group would make market share gains during the 1950s, though there remained a large enough number such that output was very deconcentrated. Canadian Builder reported on a 1959 NAHB survey of members, finding that the typical builder constructed twenty homes per year and that the 'average builder' was forty-one years of age.[3] In northern California during the 1950s, for example, large scale builders of more than 100 units a year (which included land developers) raised their market share from 32% to 74% of all output by 1960, but this group numbered more than just a few firms--89 in total (Herzog, 1963). Even at the scale of California, concentration could not rise out of a 'low' CR_4 level. And the 1960s seem to reverse the upward trend: small builders produced 22% of all units by 1969; the

TABLE 4.1: Firm Size Distribution and Market Share in the U.S. Housebuilding Industry, 1949-1997

Percent Distribution

		Small 1–25	Medium 26–100	Large >100
	Year			
	1949**	96.2	3.0	0.8
	1959	57.5	29.8	12.7
Builders*	1964	64.4	27.6	8
	1969	58	30	12
	1976***	67.0	25.0	8.0
	1987	76.5	15.9	7.7
	1992	81.7	12.8	5.6
	1997	81.7	12.1	6.3
		1–25	26–100	>100
	1949**	46.0	21.0	34.0
	1959	10.2	25.7	64.1
	1964	15.8	32.7	51.6
Units****	1969	21.5	36	42.6
	1977	8.4	34.1	57.5
	1987	12.6	29.0	58.4
	1992	18.1	34.5	47.4
	1997	18.9	27.9	53.2

* Includes multi-family builders constructing single family units.
**Size classes are 1–24, 25–99, 100+; includes multi-family builders
***The NAHB does not have data for the 1977 census year.
****From 1977 on, the distribution of units represent estimates based on NAHB member firms and the total number of units produced in the US in those census years. See note



Sources: for 1949, BLS, 1954, p. 31; for 1959-1969, Willis, 1979, p. 63, based on a sample of US builders belonging to the NAHB, and NAHB Economics Department, Member Statistics Tables.

market share of large builders was reduced to 43%. Moreover, median firm size fell and smaller builders made up a greater share of all companies over the ten years; 58% to 70%. In terms of firm size, NAHB builders have maintained this distribution since the 1970s. Estimates based on their size distribution suggest that market share has continued to be over-represented amongst large builders, yet that small and especially medium-sized firms still made up a large share of output.[4]

Relative to other industries, the Canadian housebuilding industry seems to have shared the same deconcentration as in the US, though small builders have been more prominent in Canada (Table 4.2). The Canadian Builder acknowledged the importance of the small builder in Canada in 1952:

> Across the country a great number of builders are putting up houses three and four at a time. There's nothing spectacular about these building operations and the house hungry public doesn't hear much about them. But men in the industry know that these builders have turned out a substantial part of Canada's tremendous post-war house production.[5]

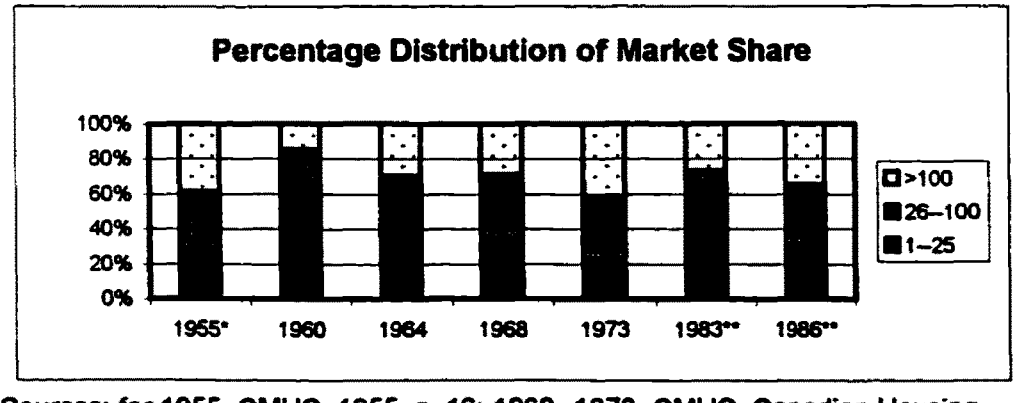
Based on a sample of urban builders financed under the National Housing Act, 78% of all builders constructed fewer than 25 dwellings each in 1955.[6] In that year, large builders accounted for five percent of all firms, their high point in the postwar period. This figure is somewhat misleading, however, because non-urban builders are not accounted for which raises the proportion of large, urban builders. As in the US, large builders did secure a substantial portion of market share though nothing near high concentration levels. Among NHA builders, there were greater levels of concentration. The Canadian Builder noted that, in 1958, five percent of NHA builders produced forty percent of all NHA output, but these were a minority of firms (see note 6).[7] Over the

TABLE 4.2: Firm Size Distribution and Market Share in the Canadian Housebuilding Industry, 1955-1986

Percent Distribution

		Small 1--25	Medium 26--100	Large >100
	Year			
	1955*	78	17	5
	1960	94.4	5	0.6
Builders	1964	87.5	10.3	2.2
	1968	88.2	9.9	1.9
	1973	81.1	14.6	4.4
	1983**	89	9.6	1.4
	1986**	89.2	8.9	1.9
		1--25	26--100	>100
	1955*	28	33	39
	1960	56.7	28.1	15.2
Units	1964	35.1	35	29.9
	1968	34.1	36.7	29.2
	1973	21.9	35	43.2
	1983**	33.1	39.6	27.3
	1986**	30.8	34.4	34.8

*For urban Canada only; size Classes are 1--24, 25--99, 100+. Statistics for 1955 overstate the degree of concentration in the nation as a whole since smaller builders are more common in rural areas.
** Size Classes are 1--19, 20--99, 100+



Sources: for 1955, CMHC, 1955, p. 16; 1960--1973, CMHC, Canadian Housing Statistics, various years (see Note 5); 1983 & 1986, Statistics Canada, Construction Service Statistics Bulletin.

following years, this journal offered several accounts of the rise to prominence of large builders, and thereby industry concentration. Multi-city operations were becoming more common, bringing higher concentration across the urban system; if small builders continued, the trade journal predicted, they would soon be eliminated by the increasingly professional nature of housebuilding which favoured large-scale operations.[8] Indeed, this alleged trend appeared so inevitable that the journal was renamed Canadian Building in March 1969, to reflect the involvement of members in construction work beyond housebuilding alone. By the early 1970s, large firms' market share rose above 40%, but again, these included a large number of builders, 79 in total. Some of this concentration came as housebuilding and land development were combined in the operations of many companies. But these two activities became distinct as quickly as they merged in the 1950s and 1960s. In the 1970s, as often happens in Canada-US trade and investment, activity moved across the border rather than within Canada. Several of the largest builder-developers turned their attention to lucrative sunbelt construction. Alternative product markets also became popular, such as shopping centres and institutional construction (CMHC, 1989-1; Lorimer, 1978). The net effect is that many of these large corporations left the 'bricks and mortar' work of constructing houses in Canada to the smaller housebuilder. According to the Housing and Urban Development Agency of Canada, its 6000 members represented 85% of all housing production in the country in 1979.[9] Data in Table 4.2 show that in the mid-1980s, large builders made up less than two percent of all firms and had dropped to an average of 29% of all output: they remain

over-represented in output, but concentration--always low--returned to mid-1960s levels after an intervening period of moderate increases.

A rough comparison between regions is possible, though existing studies are sparse and data not always comparable. In 1960, there was little variation among the provinces in the size distribution of builders, but market share was much more variable (Table 4.3).[10] In the Maritimes and British Columbia, large builders were non-existent, small builders dominated, and market share was distributed accordingly. In the rest of Canada, large builders were much more visible, especially in Ontario where they peaked at 21% market share. By 1973, concentration had generally risen, and regional variations remained, but they became less pronounced. In no region did small builders make up less than 80% of all firms; large builders always less than five percent. The industry in Ontario remained the most concentrated, though again, nothing approaching output dominance. Using national census data on the value of construction work, and data shown in Tables 2 and 3, Carroll's (1988) research on Ontario shows that the provincial experience was broadly similar to that of Canada from 1978 to 1984: large builders, on average one percent of all firms, contributed 29% of all completions. This was much the same as the provincial and national situations in the early 1960s. From these comparisons, it appears that both Ontario and Canada saw rising concentration in housebuilding into the 1970s, followed by a reversal into the 1980s.

While the contours of housebuilding at national and provincial scales can be gleaned from these sources, the paucity of data makes it difficult to understand the dynamics of change in firm size structure, even for the largest and most identifiable

TABLE 4.3: Firm Size Distribution and Market Share in the Canadian Housebuilding Industry, by Region, 1960 and 1973

	BUILDERS					UNITS			
	Small 1--25	Medium 26--100	Large >100	Total		Small 1--25	Medium 26--100	Large >100	Total
1960 Maritimes	98.4	1.6	0.0	100	1960 Maritimes	85.9	14.1	0.0	100
Quebec	92.0	7.4	0.6	100	Quebec	59.5	32.8	7.7	100
Ontario	92.2	7.3	0.5	100	Ontario	54.1	25.1	20.8	100
Western Canada	93.7	5.6	0.7	100	Western Canada	52.1	33.1	14.8	100
British Columbia	98.9	1.1	0.0	100	British Columbia	84.4	15.6	0.0	100
CANADA	94.4	5	0.6	100	CANADA	56.7	28.1	15.2	100
1973 Maritimes	84.5	14.1	1.4	100	1973 Maritimes	31.3	49.3	19.4	100
Quebec	81.3	16.7	2.0	100	Quebec	28.3	45.4	26.3	100
Ontario	71.8	18.9	9.3	100	Ontario	13.8	29.3	56.9	100
Western Canada	83.8	12.4	3.8	100	Western Canada	23.4	33.5	43.1	100
British Columbia	91.4	6.6	2.0	100	British Columbia	38.1	34.9	26.9	100
CANADA	81.1	14.6	4.4	100	CANADA	21.9	35	43.2	100

Source: CMHC, Canadian Housing Statistics, various years. See Note 5.

builders. Unlike manufacturing, mergers and acquisitions have not been important in shaping the housebuilding industry through time. In comparing mergers by large-scale builders with industrial conglomeration in the 1960s, Leo Grebler (1973, 7-9) wrote: "...it does not appear to be an impressive trend...because builders and real estate developers previously were beyond the pale of merger or acquisition candidates." Instead of mergers, changes in firm size reposition companies along the size distribution, though with no long-term effect of increasing concentration. As discussed in Chapter 2, some have speculated that industries serving established and stable product markets, or using unchanging and especially low-technology production methods, offer little opportunity for relative firm growth. It seems to apply to housebuilding, though concrete evidence is lacking. The advantages of scale economies, in particular, cannot be realised if demand swings widely in relation to seasons and business cycles, if it is not renewed often enough due to a long-lasting product, and if the market is geographically limited to local demand. Added to this is the 'contestability' of the market, whereby firms can easily enter the industry when existing builders--those that are presumably better able to grow and dominate--are realising 'surplus profits'. While these features hedge against the growth of existing firms, sub-contracting relieves new entrants of the need for building know-how, making financing the principal barrier. But the need for financing is itself limited to the short-term, financing stages of a project at a time, and even this may be covered by the favourable 'terms' that builders often negotiate with suppliers. Barriers to entry are therefore small, especially compared with those in other industries.

These factors can result in too much variability, or at least uncertainty, for large firms in housebuilding compared with other industries.

Added to this uncertainty and competitiveness is the variability in the output of housebuilders. In northern California during the 1950s, for example, large-scale builders displayed a range of movement uncommon in manufacturing, some expanding and contracting by more than ten percent from year to year (Herzog, 1963, 11). Carroll (1988) describes the same situation in Ontario: between 1978 and 1984, the majority of builders moved along the entire firm size distribution. Some of the largest builders in 1978 had moved into the 'small' category by 1984. Large builders' output appears to vary too much for sustained growth and dominance. Thus, size changes reposition builders and redistribute market share, but expansion and contraction at all sizes appear to maintain stable deconcentration rather than to centralise output among a select few builders.

Prior research on housebuilding speaks as much to the industry's deconcentration as it does to the need for more data. The contours of housebuilding can be pieced together from different sources which use different methods. Our knowledge of the dynamics of change is less developed, largely due to the lack of appropriate data. Carroll's (1988, 1998) research represents one of the few studies which trace these sorts of changes in housebuilding, and is the only work at the provincial scale in Canada. Her study in fact used a subset of data from the census of builders in the present study for the period 1978 through 1984. The data in this study therefore build on prior research by use

of a census of builders over a much longer time period, for a complete picture of industry structure in Ontario.

4.2 Housebuilding in Ontario, 1978-1998

In terms of number of enterprises, Ontario's housebuilding industry continues to be dominated by the small builder. The data permit us a window on the largest builders, those mostly likely to produce a long-run rise in market concentration. Unlike their counterparts in manufacturing, however, they are far too unstable. Small firms and deconcentration have persisted.

As shown earlier, Ontario's housebuilding industry displayed a similar structure as that of Canada and the US up to the 1970s. In that decade, large housebuilders became more prominent in Ontario than in Canada as a whole, though concentration remained low at both scales. By the mid-1980s, Ontario had come to reflect the Canadian average more closely again. In broad outline, the firm size structure of housebuilding in Ontario, and perhaps in Canada, passed through a cycle wherein concentration rose and then fell again. Up to 1998, the industry continued to be the preserve of small firms (Table 4.4).

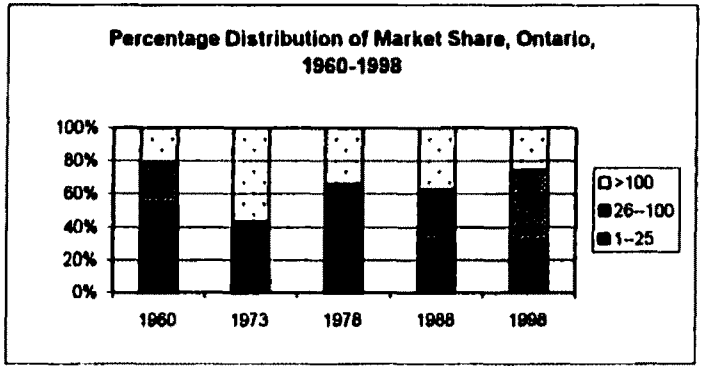
A closer examination of the annual data reveals some important features over the study period. Figure 4.1 displays the percentage distribution of the annual data, included here as Appendix 2a, and illustrates the stability of the firm size structure and dominance of small builders. Over the twenty one years, builder size classes never traded ranks in their share of total output, and small builders never made up less than 85% of all firms, on average. Indeed, builders tend to be small even within their respective size classes.

TABLE 4.4: Firm Size Distribution and Market Share, Ontario, 1960-1998 (%)

		Small (1 to 25 units/a)				Medium (26 to 100 units/a)			Large (>100 units/a)		
		1	2--10	11--25	Total	26--50	51-100	Total	101--200	>200	Total
Builders	1960	n/a	n/a	n/a	92.2	n/a	n/a	7.3	n/a	n/a	0.5
	1973	n/a	n/a	n/a	71.8	n/a	n/a	18.9	n/a	n/a	9.3
	1978	30.9	51	10.1	92	4	2.4	6.4	0.9	0.6	1.5
	1988	34.2	46	9.5	89.7	4.8	3	7.8	1.8	0.6	2.4
	1998	27.5	45.4	13.2	86.1	7.3	4.6	11.9	1.4	0.6	2

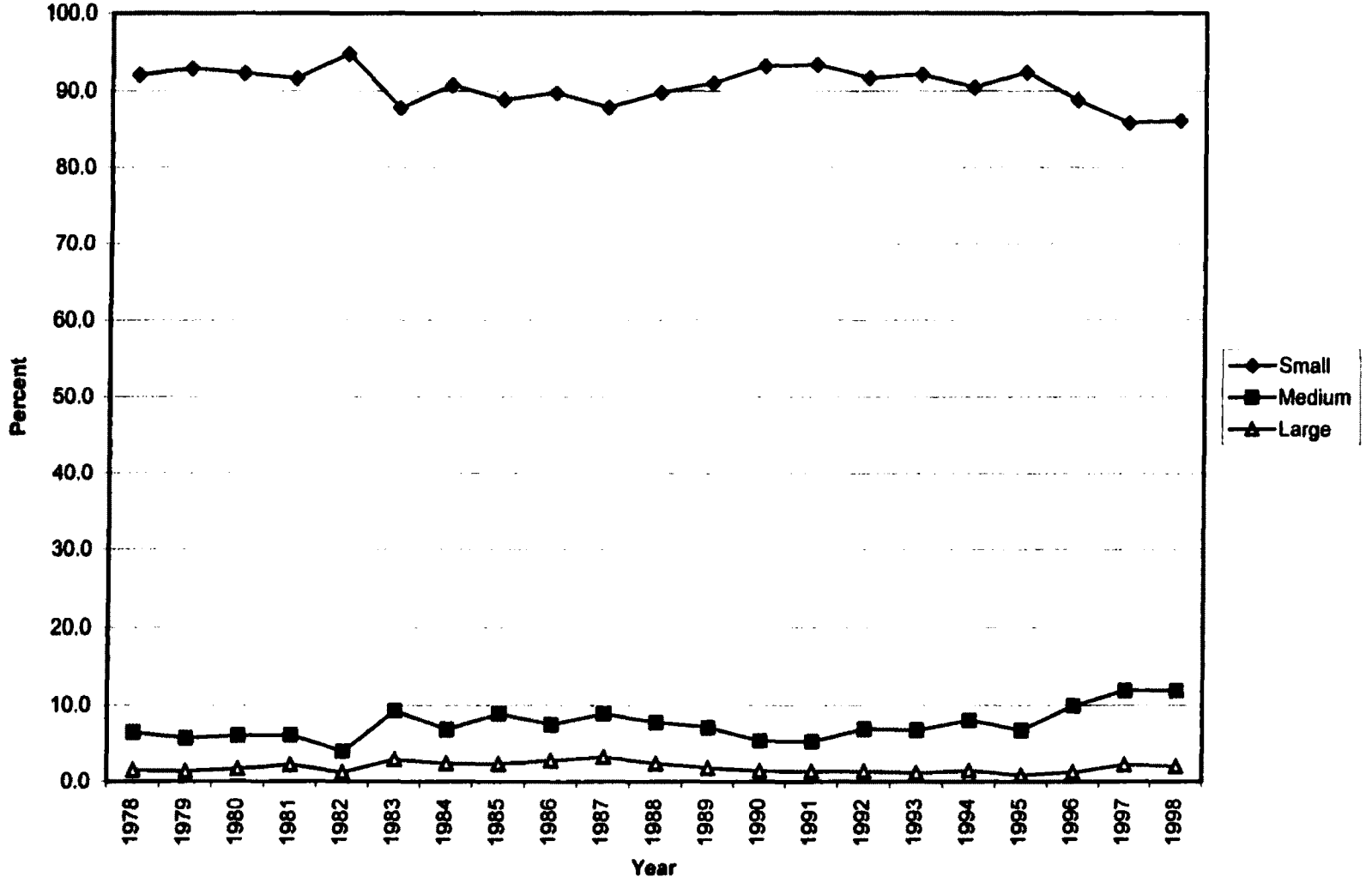
		Small (1 to 25 units/a)				Medium (26 to 100 units/a)			Large (>100 units/a)		
		1	2--10	11--25	Total	26--50	51-100	Total	101--200	>200	Total
Units	1960	n/a	n/a	n/a	54.1	n/a	n/a	25.1	n/a	n/a	20.8
	1973	n/a	n/a	n/a	13.8	n/a	n/a	29.3	n/a	n/a	56.9
	1978	2.8	19.6	14.6	37	13.3	15.5	28.8	11.7	22.2	33.9
	1988	2.8	15.7	12.7	31.2	13.7	17.5	31.2	20.4	17.2	37.6
	1998	2	14.1	15.4	31.5	19.2	23.4	42.6	14.1	11.9	26

		1978	1988	1998
Concentration	CR4	9.8, Atomistic	5.1, Atomistic	4.4, Atomistic
	IR80	648, Low	768, Low	649, Low



Source: 1960 and 1973, Canadian Housing Statistics; for 1978 to 1998, Ontario New Home Warranty Program

Figure 4.1: Percent Distribution of Builders by Firm Size Class, Ontario 1978 - 1998



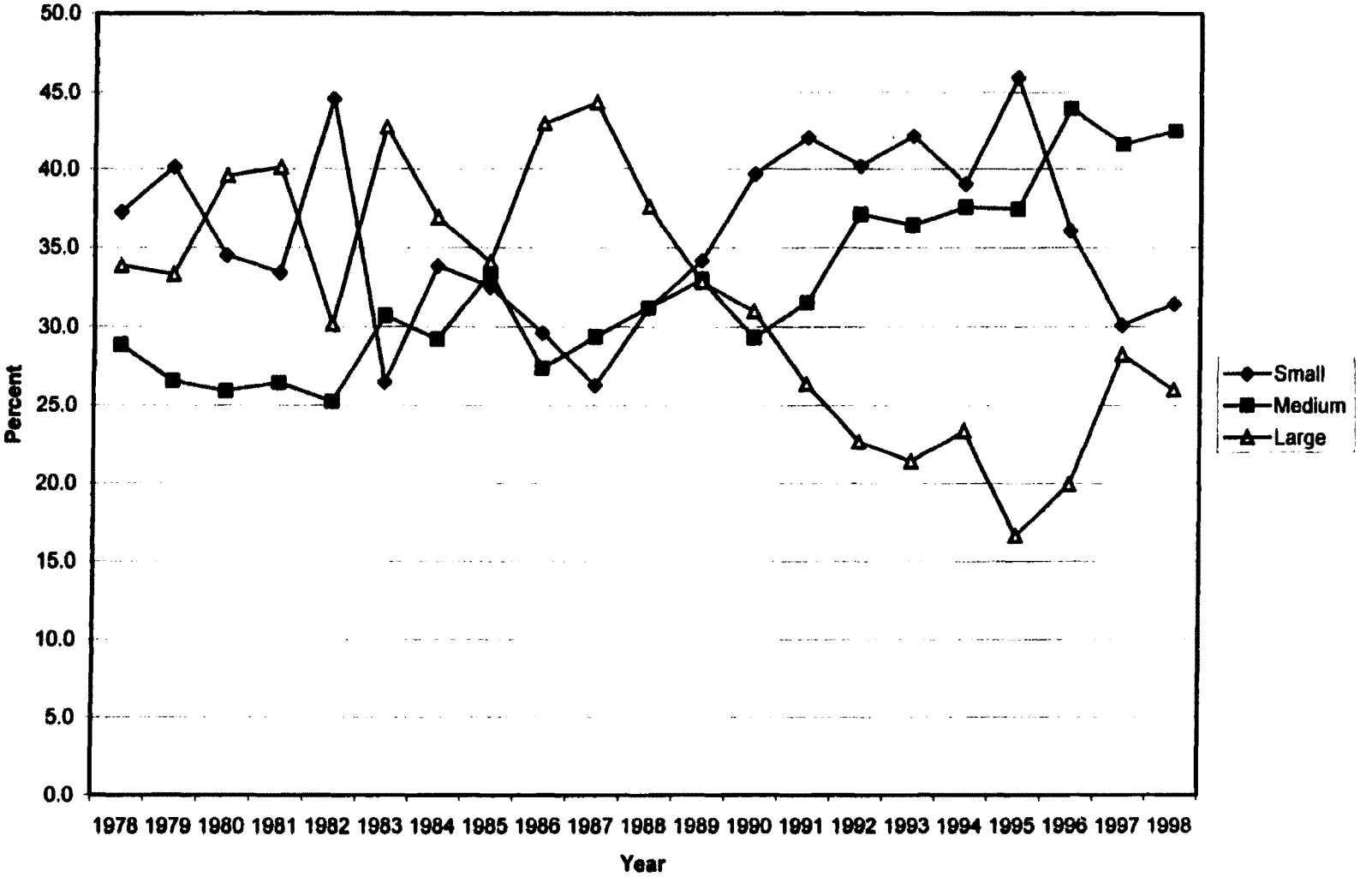
Source: Ontario New Home Warranty Program

Roughly one third of small builders constructed just one house per year, the majority of medium sized builders from 26 to 50 units, and most large builders fewer than 200 units. The distribution of builder sizes in Ontario has thus returned to its shape in 1960, prior to the rise in concentration in the province.

As in earlier years, the distribution of output was less skewed than firm size (Table 4.4). The market share of small builders was greatly reduced up to 1973, but their presence rose again in the next two decades to an average of one third of all output. After 1978, medium and large builders traded places. Large builder made gains by 1988 but were replaced by medium size firms by 1998. Overall, no single size class dominated over the twenty one years as the distribution of output was roughly equal among them. In spite of the presence of the largest builders in the province, Canadian Builder proclaimed that Ontario remained a "province of the little guy" in housebuilding, where "the vast majority of builders build what they can count on the fingers of one hand."[11]

Annual data also reveal some important features over the study period and within size classes. First, if the distribution of output was less skewed than firm sizes, it was certainly more erratic over time, as shown in the annual data depicted in Figure 4.2, and included as an Appendix 2b. All size classes experienced quite wide-ranging changes in output, even over short periods of time. Second, amidst these sorts of changes, some general patterns emerge in relation to firm size classes. Small builders are quite diverse. On average, one house builders comprised the smallest share of all output whereas two-through ten-house firms were a leading group, building one third of all units, on average. Indeed, the latter was the largest group in output for the first half of the 1990s. This leads

Figure 4.2: Percent Distribution of Market Share by Firm Size Class, Ontario 1978 - 1998



Source: Ontario New Home Warranty Program

to the third feature, which is that output did not cluster among the smallest builders within each class in the same way that builder numbers did. Output among medium sized builders was concentrated among the larger of the class; the 51- to 100-house builders. These too were the more successful in their class, making the greatest gains to replace large builders in the 1990s. Thus, if builders tended to be small, even within size classes, output showed a tendency, albeit not as pronounced, to cluster among larger firms.

These opposing patterns of firm sizes and market share do not, however, translate into higher market concentration. Ontario's housebuilding industry sustains builders of all sizes. And although small builders are underrepresented in output, when several cohorts of small builders are combined, they built a large share of all new homes. As a result, industrial concentration remains very low. It was highest in 1978, when the CR_4 was only 9.8% of all output, and the IR_{80} required 647 builders. The CR_4 dropped at each ten year interval, marking further deconcentration. The IR_{80} rose by 1988 as the number of firms required for 80% of output increased, but it had fallen again by 1998 due to gains made by medium-sized builders. Thus, not only has Ontario's housebuilding industry not experienced rising concentration, it actually diminished up 1998 to its levels of the early 1960s; here too, the cycle of rising and then diminishing concentration is apparent.

The absence of national data does not permit comparison with Ontario, though the provincial experience is suggestive of national trends. Ontario's rise in concentration during the 1960s and 1970s was followed, albeit less drastically, at the national scale, and represented the upper bounds of concentration for the industry within Canada. We can infer from the province's experience since the mid-1980s that concentration in Canadian

housebuilding is no greater than in Ontario, since the largest builders in the country are located there (CMHC, 1989-1, 16-17).

It is among the large builder class that we would expect to find the agents of concentration; a group of builders that could capture ever more market share as time passes. This change has not happened. At the very least, we would expect the largest firms to be the most persistent through time. But we find the opposite for Ontario's housebuilders: even these firms differ markedly from large manufacturers (Table 4.5): of the 50 largest builders in 1998, just four were present in 1978. Indeed, large builders were much less stable in the five years up to 1998 than large US manufacturers were over 35 years, as shown in Chapter 2. In terms of firm size classes, most of the 57 large builders in 1998 were absent at each earlier five year interval. Those continuously present were as likely to be found in a smaller size class. This reinforces the point that mergers are unimportant in housebuilding and that their absence from the data do not skew the industry's firm size structure. Firm size changes reposition builders along the size distribution but do not alter market structure. More important, size appears to offer little in stability, and probably little in competitive advantage as well, thus maintaining a wide-ranging firm size distribution and deconcentration.

4.3 Conclusion

It is difficult to know how well Ontario continued to represent housebuilding in Canada into the 1990s, and how Canadian and US experiences compare. Ontario data approximate the Canadian average in the past, largely because of the provinces impact on

TABLE 4.5: Stability of the Largest Firms in Ontario's Housebuilding Industry, 1978-1998

The Largest Builders in 1998	1998	1993	1988	1983	1978
Among 50 Largest	50	16	8	4	3
Among 51st to 100th Largest	-	3	1	2	0
Among 101st to 200th Largest	-	1	1	1	1
Not Among 200 Largest/Withdrawn	-	30	40	43	46
Total	50	50	50	50	50

The Largest Builders in 1978	1978	1983	1988	1993	1998
>100	45	12	11	6	3
51 to 100		7	1	1	0
26 to 50		2	2	2	3
11 to 25		1	4	1	1
2 to 10		1	1	2	1
1		1	1	0	0
Not Present/Withdrawn		21	25	33	37
Total	45	45	45	45	45

Source: Ontario New Home Warranty Program

national trends. The largest builders in the country are Ontario firms, signifying that the industry is probably less concentrated outside the province. Like the US and Canada in earlier years, housebuilding passed through a cycle of rising concentration into the 1970s, which then reversed beginning in the mid-1980s. More broadly, even when concentration peaked in housebuilding, it never approached the level of centralisation of some other industries. For this major political jurisdiction, then, housebuilding is an industry that contrasts sharply with the more familiar centralised activities in the industrial organisation literature. Few builders could sustain the output needed for long-term growth and possible market dominance.

In general, housebuilding remains an industry of very low concentration. But what are the dynamics of change beneath this stable, decentralised firm size structure? We have seen how the largest firms can be very unstable, even over short periods. Does this mean that the entire housebuilding industry in Ontario experiences high turnover beneath its stable firm size structure? What is the degree of turnover on an annual basis? Since the housing market is so cyclical, often closely in step with business cycles, then perhaps these have an impact on speeding and/or slowing firm turnover. These questions are taken up in the next chapter.

Notes

[1] John Hunt, "Modern Mass Methods," *Canadian Builder* 1 (March 1951): 22-3.

[2] As of 1959, the data in Table 4.1 are a sample of builders belonging to the National Association of Home Builders, in contrast to the survey taken by the BLS for 1949. Membership in the NAHB is not mandatory, and would undercount the number of small builders in the country. This would have the effect of raising the concentration represented in their data relative to the national average. Despite this, NAHB builders were still very deconcentrated. See Willis, 1979, 60-64.

[3] Staff, "Typical Housebuilder is 41 Years Old", *Canadian Builder*, 10 (May 1960): 91.

Notes

[4] Unfortunately, these can only be estimates. The NAHB, the BLS and the Census Bureau do not collect data on the market share distribution of builders. The ONHWP data and NAHB membership, categorised by size classes, is used to estimate the distribution of market share in Table 4.2. This is done by taking the total number of NAHB firms in each size class in the given years, multiplying that number by the average builder size in each size class in the ONHWP data, and comparing that output to the US total in the 1977 census year. Since the NAHB collected its data in 1976 and the ONHWP data begin in 1978, these can only be compared with output in the census year of 1977. This method approximates the NAHB's 'builder penetration rate'—the proportion of all "US firms estimated to belong to the NAHB, 70-80% in the late 1990s. The output calculated roughly corresponds to the NAHB's penetration rate, and does not return firm size distributions and market shares significantly different from previous years. A reliance on the ONHWP data for average builder size is the best solution available to the absence of data and is unlikely to underestimate concentration because the largest builders in Canada are located in this province. Still, for the period since 1976, the firm size structure of housebuilding in the US is only tentatively represented in these data, and reflect the paucity of information sources for this industry. As Stanley Duobinis, economist at the NAHB put it in personal communication on 8 May 2000: "The problem is, who would collect this kind of information besides us?"

[5] Staff, "Dorval Builder Stresses Minimum Monthly Charges", *Canadian Builder* 2 (May 1952): 37-8, 40-1.

[6] On average, NHA Builders represent 15% of all residential construction in Canada during this period. See Spurr, 1976, 186-7.

[7] Staff, quoting Dr. Charlotte Whitton, speaking before the fifteenth annual CAREB conference, Montreal, "Last Year, 5% of Builders Built 40% of Houses," *Canadian Builder*, 8 (November, 1958): 7.

[8] Staff, "Multi-market Builders Crack New Cities", *Canadian Builder* 11 (December 1961): 33-7; Phil Meere, "On Site," *Canadian Builder* 16 (May 1966): 70; Staff, "Blackburn Hamlet: Home Merchandising and Market Research in the Modern Way," *Canadian Builder* 17 (February 1967): 41-8; Staff, "Hidden Costs—Why Municipalities Must Ease Up on Imposts and Restrictions," *Canadian Builder* 22 (March 1972): 15.

[9] William Small, "HUDAC's 36th Annual Conference in February Will Highlight All Aspects of Homebuilding," *Canadian Builder* 29 (January, 1979): 40.

[10] These data again represent only NHA builders—a minority of all firms in Canada. See note 6.

[11] Staff, "The Big Little Guys," *Canadian Builder* 39 (November-December 1989) 12.

Chapter 5: Firm Transience in Ontario's Housebuilding Industry

In 1974, the Canadian Builder reported favourably on the efforts of the Housing and Urban Development Association of Canada (HUDAC) to develop a new national home warranty program.[1] Amidst consumers' concerns over the quality of newly-built homes, and the trustworthiness of the builders constructing them, HUDAC offered what it thought to be reassurance: the association's member firms averaged about fifteen years of age and were therefore old and stable enough to serve the market appropriately. As shown in Chapter 2, an average tenure of fifteen years is hardly indicative of firm stability, and could only be promoted as such in an industry where transience is common. In part, HUDAC's promotion of stability and the warranty program rested on the backs of big builders; they had become large and visible, but unlike their counterparts in manufacturing, they offered little assurance to their buyers. Yet even if HUDAC favoured the large builder, its membership may not have been very stable.[2]

The previous chapter concluded with a brief examination of the low level of stability of the largest builders in Ontario, and therefore probably the largest in Canada. The evidence revealed that large builders are unable to remain in the industry for very long, let alone make market share gains and raise concentration as in other industries. The instability of large builders raises an immediate question: what are the dynamics of

industry change in housebuilding? In particular, how frequently do builders enter and exit the industry, and what is the impact of transience on industry membership?

This chapter will examine the transience of Ontario builders since 1978 and their fluctuating output. Firm turnover occurs through periods of economic growth and decline, and through entire business cycles. It may also occur at significant levels from one year to the next. In any case, the deconcentrated firm size structure of the industry, as shown in the previous chapter, goes uninterrupted. There is evidence that housebuilding in Ontario is experiencing a longer-term reorganisation in favour of medium-sized builders, though the industry remains one of many small firms.

5.1 Annual Instability

HUDAC's interest in implementing a national warranty program was partly a response to avoiding a government intervening with its own program. Aiming for industry self-governance, HUDAC's effort came amidst a flurry of such calls, not only in Canada, but also in the US and Great Britain.[3] One popular target for the Canadian Builder and HUDAC was the 'fly-by-night' builder, usually the small firm where the principal operated by the 'seat of his pants', planning and coordinating activities on the 'back of an envelope'. These were common epithets used to corral support for doing away with the nuisance of problem builders, and thereby raise confidence in home buying. By continually entering and exiting, these firms cast the entire industry in a bad light. A warranty program could guard against such operators and at the same time aid in the development of large builders.

To a large extent, concerns over firm transience in housebuilding were well founded. As discussed in chapter 2, there are few studies of the housebuilding industry and only a subset of these have been empirical. If firm size structure has received some attention, firm turnover has usually gone without mention, even in major studies (Denowitz, 1982; BLS, 1949; Willis, 1979; Colean, 1944; Grebler, 1950; Eichler, 1982). From the evidence that does exist, firm turnover in construction in general, and housebuilding in particular, is among the highest of all industries. In the latter half of the 1940s, contract construction in the U.S. had twice the level of firm turnover of manufacturing, with roughly one in five firms either entering or exiting annually (Colean, 1952, 274-5; Maisel, 1953, 384). Relative to all industries, this continued through the 1950s (Herzog, 1963, 29; Gillies and Mittelbach, 1962, 17). More recent research on housebuilding in the US has not presented evidence on firm turnover (Grebler, 1973; Eichler). However, these trends do not seem to be untypical. In one of the very few studies to report such data, Walsh (1972, 103) found the same in Newcastle, Australia during the 1950s and 1960s: in the Newcastle region, one third to 40% of all firms either entered or exited annually.[4] Ball (1988, 115) estaimted a similar rate of firm failure in British construction from 1970 to 1985.[5] These figures speak as much to the similarity in construction firm turnover in different places as they do to the paucity of data. When data are available, they can aggregate housebuilding within construction and can underestimate turnover. As Miles Colean remarked in 1944 (pp. 83-4): "We might speak of *turnover* rather than *failure*...since the small amount of invested capital often makes formal bankruptcy unnecessary."

Canadian data are no better (ECC, 1974). Firm turnover trends must be pieced together from various sources, sometimes requiring inferences from data that do not always speak directly to the issue. In 1956, CMHC reported on a selection of builders from across the country operating under the National Housing Act. Firms were classed by size and period of entry into the industry. The data show that only one in six builders had been in operation for more than fifteen years. Half of all companies were less than five years old, likely entering to replace exiting builders. Builders in Vancouver in 1969 did display greater longevity with increasing firm size, but the largest companies - - those building at least 100 units annually - - were only 13 years old on average. Small builders, those that build five units or less and who made up the majority of all companies, were only six years old on average (Price, 76). A national survey of builder-developers in 1971 showed that patterns in Vancouver were generally apparent (CMHC, 1971, A1). The data show that average firm age had increased over that reported in 1955, especially for larger companies. This was understandable since the industry had had time to mature over the preceding postwar decades. Still, well over half of all companies were less than fifteen years old.[6] Where actual firm turnover data exist, the general pattern does not change. For the period 1956 to 1969, the Economic Council of Canada (1974, 18-19) estimated that turnover could represent half of all companies annually. A study of builders in Kingston for 1961 to 1976 displayed a similar pattern, with the vast majority of firms turning over every five years. Only one small builder, for example, lasted through the fifteen year period (Orazietti, 1977, 57). Builders in London and Windsor

fared no better. From 1979 to 1981, one-quarter to half of all builders in these cities exited (CMCH, 1989, 34).

One of the problems associated with such high rates of turnover is that dissatisfied customers are often unable to seek recourse from the builders of their homes. New home warranty programs and builder licensing have therefore proliferated across Canada and few jurisdictions are without them today. Meanwhile, firm transience has continued, and is not only a small firm affair. I concluded the previous chapter by highlighting the relative instability of the largest housebuilders in Ontario to show how this minimises the potential for long-run concentration. These larger companies could be present, temporarily withdrawn, or permanently dissolved. But if the large builder could be so transient, how much more was this true of smaller firms?

Table 5.1 shows the average annual movements of builders in housebuilding in Ontario over the study period. These movements could be exchanges between size class or into and out of the industry, either temporarly or permanently. The table shows that builders tended to stay within their same size classes from one year to the next, but at a much lower rate than might be expected. When movements did happen, they tended to be to adjacent size classes. But the most striking feature of Table 5.1 is the degree of annual firm entry and exit, most of it among the numerically dominant small builders. Firm turnover in Ontario, as elsewhere, is a defining feature of housebuilding.

In Ontario, 19,671 builders were active at some point from 1978 through 1998, but only an average of 3,061 were present in any one year (Table 5.2). A mere twenty builders managed to build at least one home every year from 1978 to 1998. These figures

Table 5.1: Average Annual Firm Movements in Ontario's Housebuilding Industry, 1978 - 1998

% of Firms Moving Between Size Classes, Entering and Exiting

		To this Size Class									
		1	2-10	11-25	26-50	51-100	101-200	>200	Gross Entry*	Gross Exit*	Total (%)
From this Size Class	1	**11.7**	11.8	0.6	0.1	0.1	0.0	0.0	36.7	38.9	100
	2-10	11.7	**35.8**	5.1	0.9	0.2	0.1	0.0	22.6	23.5	100
	11-25	4.2	28.8	**26.9**	9.7	2.7	0.6	0.1	15.0	11.9	100
	26-50	3.5	14.3	21.0	**23.1**	9.0	2.1	0.3	17.2	9.5	100
	51-100	2.1	9.9	9.9	18.2	**21.7**	9.5	1.0	19.8	7.9	100
	101-200	3.0	6.8	5.6	9.7	21.5	**23.0**	7.4	17.5	5.5	100
	>200	0.6	3.2	4.1	4.1	7.8	19.4	**51.0**	7.0	2.9	100

*Gross Exit includes a minority firms that leave the industry and return to build again at some later date. Gross Entry therefore includes firms re-entering the industry after at least one year of absence

Source: ONHWP data.

Table 5.2: The Changing Annual Status of Firms in Housebuilding, Ontario 1978-1998

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Total Firms	3105	3449	2434	3126	2507	1895	2067	2411	3107	3593	4247
Persisters*	-	2251	1814	1525	1432	1063	1242	1420	1742	2041	2454
% Persisters	-	65	75	49	57	56	60	59	56	57	58
Temporary Turnover											
Gross Entry	-	1198	620	1601	1075	832	825	991	1365	1552	1793
% Gross Entry		35	25	51	43	44	40	41	44	43	42
Gross Exit	854	1635	909	1694	1444	653	647	669	1066	1139	1557
% Gross Exit	28	47	37	54	58	34	31	28	34	32	37
Permanent Turnover											
Entry (excludes re-entry)	-	-	-	-	-	571	630	774	1043	1322	1221
% Entry	-	-	-	-	-	30	30	32	34	37	29
Exit (excludes withdrawal)	419	816	511	1365	1232	411	398	457	749	867	1229
% Exits	13	24	21	44	49	22	19	19	24	24	29

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Mean
Total Firms	4486	4190	2885	3027	3071	3132	2905	2827	2938	2882	3061
Persisters*	2690	2687	2036	1839	1995	2055	2039	1945	1991	2002	1913
% Persisters	60.0	64.1	70.6	60.8	65.0	65.6	70.2	68.8	67.8	69.5	62.7
Temporary Turnover											
Gross Entry	1796	1503	849	1188	1076	1077	866	882	947	870	1145
% Gross Entry	40.0	35.9	29.4	39.2	35.0	34.4	29.8	31.2	32.2	30.2	37.3
Gross Exit	1799	2154	1046	1032	1016	1093	960	836	936	-	1157
% Gross Exit	40.1	51.4	36.3	34.1	33.1	34.9	33.0	29.6	31.9	-	37.2
Permanent Turnover											
Entry (excludes re-entry)	1543	1198	568	690	715	712	573	561	576	591	830.5
% Entry	34.4	28.6	19.7	22.8	23.3	22.7	19.7	19.8	19.6	20.5	26.4
Exit (excludes withdrawal)	1432	1544	763	727	748	-	-	-	-	-	854.3
% Exits	32	37	26	24	24	-	-	-	-	-	27.0

*Defined as firms that were active in the previous year.

Source: Ontario New Home Warranty Program

reveal significant annual firm turnover. The average number of firms that remained active from one year to the next, which I will term annual "persisters", was 1913, or 62.7 percent. At most, persisters made up three quarters of all companies in 1980, but barely half of all firms (49 percent) in the very next year. Thus, not only are housebuilders transient, but firm turnover can change rapidly from year to year. With such a low average rate of persistence, a large number of firms entered the industry every year. These could either be new companies or re-entrants that had temporarily withdrawn. Taken together, these newly active companies made up an annual average of 37.3 percent of all builders. Within this group, new firms that had never built before were the majority and they comprised over one quarter of all builders over the study period, on average.

The exit or removal of firms from the industry also reflects the varying successes of persisters from year to year and is made up of different kinds of companies. The removal of firms may be temporary ("withdrawals") or permanent ("exits"). On average, withdrawals and exits together removed 37 percent of all companies that were present in the prior year. Just as firm entry made up the majority of entering companies, most firm removals were permanent exits.

If persisters dominated in annual numbers, they were even more adept at maintaining their share of output. Figure 5.1 depicts the percent distribution of output according to firm status, showing that persisters consistently produced the majority of all dwelling units. On average, they accounted for 63% of all companies and 80% of all output. Since most firm removals are small companies, and those entering to replace them similarly small, persisters are more significant in output than in firm numbers. Still,

Figure 5.1: Percent Distribution of Firms and Dwelling Units in Housebuilding, by Firm Status*, Ontario 1978-1998

Figure 5.1a: Firms

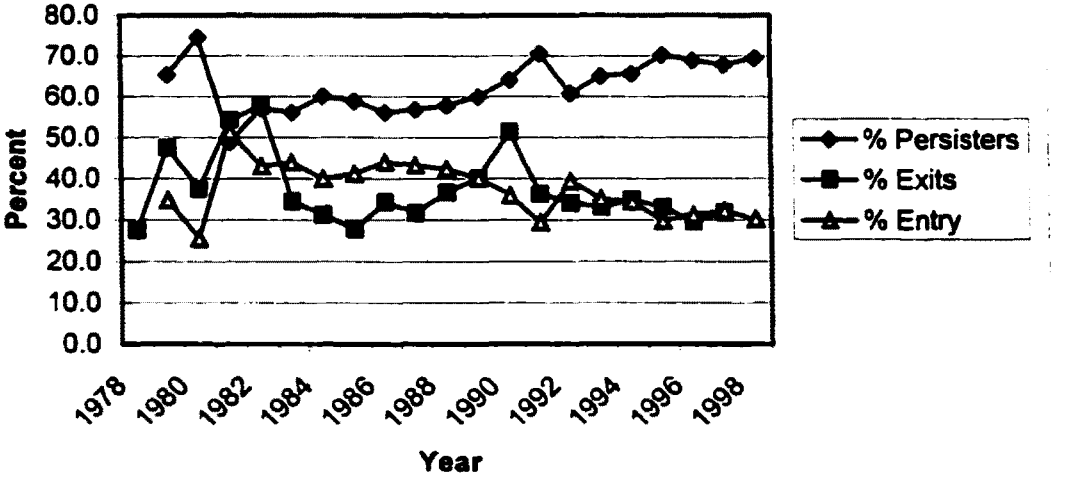
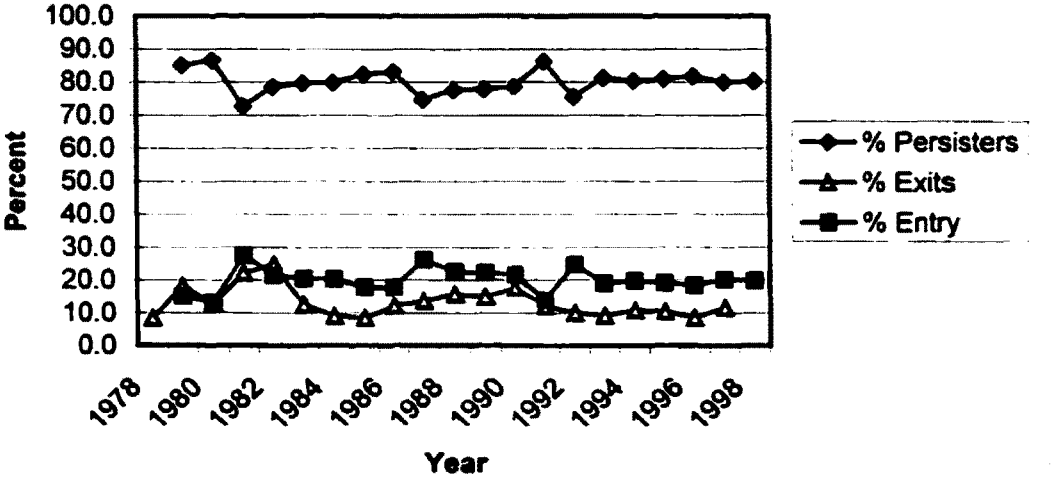


Figure 5.1b: Dwelling Units



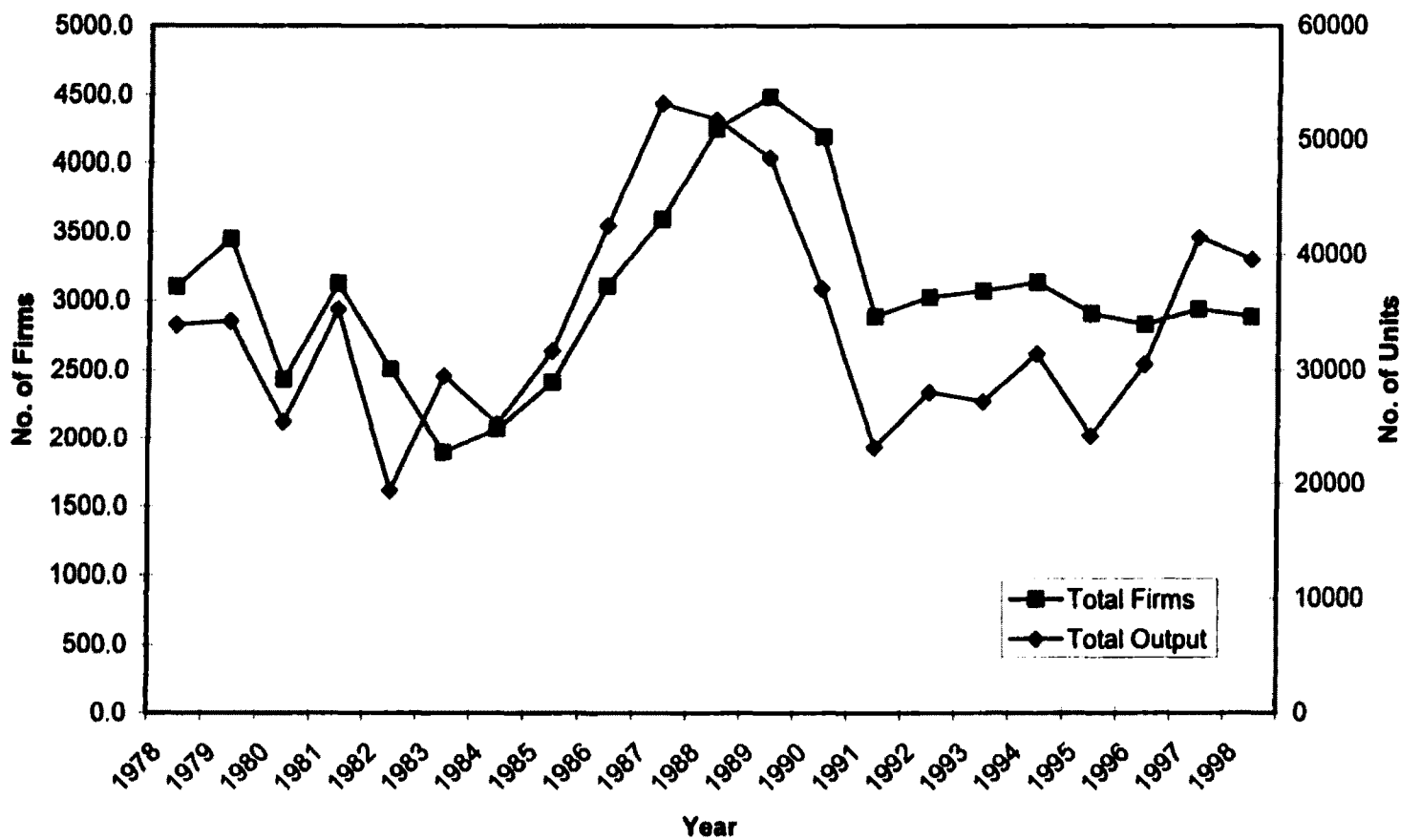
Source: Ontario New Home Warranty Program

on average, one in every five dwelling completions were produced by entering firms, mostly new companies that had never built before. From these annual data, we begin to see just how transient firm membership is in Ontario's housebuilding industry.

5.2 Changes Through Periods of Expansion and Contraction

Information on annual change captures the instability of the industry, and suggests that persisters remained the most important type of builder through time. But such is not the case when we examine the dynamics of change through longer periods of output expansion and contraction. It is during such market turnarounds that we would expect firm transience to rise and fall. Figure 5.2 shows the changing number of builders and of total output in Ontario over the study period. The trend lines show great fluctuations but, not surprisingly, they tend to move in close unison. An irregular decline in the late 1970s is followed by a boom and bust cycle in the 1980s. Only in the 1990s do the lines cross though still moving in the same general directions. So similar are the changes in numbers of firms and output that they produce a Pearson's r of .698. In terms of overall output since 1978, the most pronounced pattern began with a rise in the early 1980s, peaked in 1987, and then dropped to the low in 1991. These fluctuations are in turn strongly associated with the state of the province's economy. As discussed in Chapter 2, durable goods industries, and especially construction, are more cyclical than other industries. For this reason, housebuilding shares with Ontario Gross Domestic Product directions of cyclical change, but not their magnitude. Rather, Ontario's construction GDP, output by the province's housebuilding industry as a component of that, and firm numbers are more

Figure 5.2: Number of Firms and Dwelling Units in Housebuilding, Ontario 1978-1998



similar through time. If annual changes impact different kinds of firms, periods of output growth and decline accelerate firm turnover.

The five year industry contraction that began in 1978 brought changes to the kinds of firms present in housebuilding. Although we would anticipate some firms to fail during an economic bust, we would not expect them to become a minority of all companies. We certainly would not anticipate a crop of new companies to become dominant during a bust. In fact, as expected, the number of builders present in 1978 shrank in each successive year up to 1982 (Table 5.3). Their decline was so rapid that even amidst diminishing total firm numbers, those that remained constituted a decreasing share of all companies. By the worst year, persisting firms had become a minority. A small number withdrew more gradually and would return to build again after 1982 but the majority that left the industry exited soon after the bust began, never to return.[7] In place of these companies came entrants, initiating building activity some time after 1978 despite industry contraction. They came to dominate by 1982.[8]

Given that entrants were mostly small companies, their market share gains were less dramatic than their numbers. Most failing firms were small, allowing persisters to hold on to their market share. Notably, those firms that withdrew later into the bust held on to their level of output, representing gaining market share amidst industry contraction. Still, these firms constituted a small proportion of all output, leaving persisters and entrants to share roughly equally all output by 1982. Might the poor performance of extant 1978 firms be attributed to industry contraction? If so, would the crop of firms present in 1982 perform better into the ensuing period of growth?

Table 5.3: Percent Distribution of Firms and Dwelling Units in Housebuilding During a Bust, by Firm Status, Ontario 1978-1982

	1978	1979	1980	1981	1982
Number of Firms	3105	3449	2434	3126	2507
Firm Status in Current Year*					
Persisters		65.3	60.4	54.2	45.3
Withdrawals		3.2	4.6	2.8	4.6
Exits		21.6	32.1	8.2	7.9
Entry		34.7	39.6	45.8	54.7
Total		100	100	100	100

	1978	1979	1980	1981	1982
Number of Units	33959	34239	25460	35275	19371
Firm Status in Current Year*					
Persisters		85.0	71.9	65.2	53.5
Withdrawals		0.9	1.4	0.6	2.4
Exits		7.2	5.3	4.4	7.8
Entry		15.0	28.1	34.8	46.5
Total		100	100	100	100

*Persisters are those firms which remained in the industry from the previous year. Withdrawals are those which left he industry for at least one year but returned in some subsequent year. Exist are firms which left the industry permanently. Entry refers to new firms.

Source: Ontario New Home Warranty Program

A clearer picture of the dynamics of change emerges from the robust growth in the 1980s. Meeting this period of expansion are two groups: builders remaining from the beginning of the earlier recession and those that entered thereafter. Taken together, these two groups of builders made up the next collection of firms that would meet the ensuing upswing in output in the 1980s. It is reasonable to expect that these builders could best take advantage of the coming growth in output. But as with the earlier period of contraction, we find that builders present in 1982 experienced an absolute decline in numbers and output by 1987 (Table 5.4). This occurred while both firm numbers and output rose dramatically, relegating these companies to a small minority: by 1987, persisters were reduced to barely 17 percent of builders in the province, producing only 34 percent of dwelling units.

Beginning with 1983, we can differentiate the kinds of firms appearing after 1982: new firm entrants and re-entrants appearing after some period of absence. Re-entrants, those that were absent in 1982 but building in some earlier year, were stable in numbers while their output actually grew. These builders were therefore able to maintain their output share amidst industry growth, proving to be a stable and flexible group, though again, representing only a small portion of total output. New entrants took most advantage of the boom, swelling in numbers and output to supplant the poor performance of those builders present since 1982. New entrants would comprise over three quarters of all builders in Ontario by 1987, building two-thirds of all single-family dwellings. To ensure that the selection of 1982 as a starting year has not introduced any biases, the same procedure was followed for 1984. Again, the presumption was that incumbents

Table 5.4: Percent Distribution of Firms and Dwelling Units in Housebuilding During a Boom, by Firm Status*, Ontario 1982-1987

	1982	1983	1984	1985	1986	1987
Number of Firms	2507	1895	2067	2411	3107	3593
Firm Status in Current Year						
Incumbents*		56.1	41.2	30.9	23.5	16.6
Re-entry		13.8	11.6	10.1	8.6	6.6
New Entry		30.1	47.2	59.0	67.9	76.8
TOTAL		100	100	100	100	100

	1982	1983	1984	1985	1986	1987
Number of Units	19371	29507	25265	31685	42596	53254
Firm Status in Current Year						
Incumbents*		79.6	57.8	48.9	42.4	33.8
Re-entry		3.1	3.4	3.4	3.5	3.4
New Entry		17.3	38.8	48.0	55.0	62.8
TOTAL		100	100	100	101	100

*Defined as present in 1982

Source: Ontario New Home Warranty Program

would be best able to take advantage of growth, in this case mid-way through the upturn. Instead, the pattern from 1982 was repeated, confirming that the 1980s boom aided new firm formation rather than persistence and growth. Here too, the contrast with the annual picture of change is apparent, as entering firms took best advantage of rising demand. Thus, it was new firms more than persisters that would face the next change in the market, a bust up to 1991. How did this next crop of existing firms, present in 1987, respond to the downturn?

By referring to Figure 5.2, we see that the decline in output which began in 1987 was not immediately matched by firm numbers. New firms continued to enter a saturated and contracting market. In fact, in only one year, 1987, were extant builders reduced to just half of all firms and three quarters of all output due to firm entry. As in the boom years, entrants went on to become the dominant group, first in firm numbers, then in output. By the end of the bust in 1991, new entrants comprised twice as many firms as those which had persisted since 1987 and they produced the majority of houses.

The removal of firms between 1987 and 1991 may be analysed by differentiating the kinds of firms that left housebuilding: temporary withdrawals and permanent exits. In contrast to persisters from 1987, the results show that exits occurred quickly after output began its decline and made up the majority of removals, while withdrawals were more resilient. More firms permanently left housebuilding immediately as output began to shrink, whereas those firms that withdrew, and would go on to re-appear into the 1990s, lasted longer into the bust. This repeats the observations of the recession up to 1982, where permanent firm losses were more rapid and abundant. The mid-point year 1989

was selected to ensure that 1987 did not introduce a bias, and again, the same pattern was found. Through the bust, then, persisters had come to share industry dominance with firms that were born of the overshoot in firm numbers after 1987, even if both categories experienced losses as the bust wore on. Once again we see that the annual picture in firm turnover, in which persisters fare better over shorter periods, is not repeated through this period of output decline. Together, persisters and entrants led the way into the following upswing after 1991.

The expansion period of the 1990s was examined using the same procedure used for the 1980s boom. These two expansion periods were different in that output growth in the 1990s was smaller and more variable, and was not accompanied by a rise in firm numbers. In this case, 1991 was used as the starting year to analyse the alternative trajectories of incumbents, re-entrants, and new entrants, for that year marks the low point of output in the 1990s, but not of firm numbers. As before, a subsequent year, 1993, was used to check for any biases and none were found. We would again expect to find that extant builders would fare best; not just that their survival would be sustained by the favourable market, but that they would grow as well. However, the results of the 1980s are broadly repeated, except less dramatically: incumbents did not lose as much ground to new entrants, though the latter did become the majority by 1998, and re-entrants were again more stable if marginal group.

In general, firms present at the beginning of each period of output change had often become a minority by the time the market began its turnaround. Entrants supplanted the diminishing number of persisters that stayed on through each period.

Meanwhile, a marginal group of more flexible firms withdrew and re-entered the industry to maintain consistent firm numbers and output. Existing firms seemed to be only modestly aided by output expansion during the 1980s, but they still became a minority of all companies. We can conclude from these findings that firms may persist from year to year but turnover through longer periods of output change can renew the membership of firms in housebuilding. Existing firms, present at the beginning of a market turnaround, whether decline or growth, soon become a minority. Firm presence is indeed brief in housebuilding. Does the business cycle therefore introduce a complete renewal of membership in housebuilding?

5.3 Cyclical Change and Industry Reorganisation

If periods of output change spell firm transience, business cycles must see an even larger amount of turnover. Indeed, this has been the experience of Ontario's housebuilding industry, where the constant stream of new entrants renews the industry's membership almost completely every seven to ten years. But an examination of complete cycles reveals another pattern: whereas incumbents become the minority of builders through periods of expansion and contraction, they outlast new entrants through complete cycles. An overview of business cycles also reveals signs of a structural change in the industry from the mid-1980s whereby medium sized builders have become the dominant cohort into the 1990s.

Beginning with the business cycle from 1978 through 1987, we have already seen how entrants came to dominate existing builders by 1982. These two classes of builders

in turn became a minority of all firms by 1987, owing to the massive influx of new companies during the boom years (Table 5.5). In output too, most units came to be produced by firms born of the growth years, rather than those already present in 1982. However, if entrants outlast incumbents through an isolated period of growth and decline, we find that the latter fare better through the complete cycle. By 1987, firms that were already present in 1978 came to outnumber those that entered between 1978 and 1982. In output too, the ensuing upturn favoured 1978 persisters more than subsequent entrants, so much so that their volume of production at the end of the cycle exceeded that in 1982. Unlike the picture of firm and output changes through periods of expansion and contraction, then, this complete business cycle favoured persisters over entrants from its early stages. Still, all firms remaining after the first stage of the business cycle up to 1982 went on to become a small minority of all builders by 1978, contributing also a small proportion of all housing units as well.

A similar pattern emerges in the following two cycles, the first beginning with an upswing in 1982, the second with a bust in 1987 (Table 5.5). For the cycle beginning in 1982, we can differentiate between new entry and re-entry, and we find the same as above: firms from the first stage ending with the peak year of 1987 went on to become a minority by 1991, the next low year, and to build a minority of all units as well. However, persisters again proved more successful. The massive influx of firms up to 1987 meant that entrants remained in larger numbers up to 1991. However, entrants also lost a greater share of their firms and output through the downswing, suggesting that incumbents proved more resilient over the entire cycle. Notable as well is the small group

Table 5.5: Changes in the Composition of Housebuilding Firms and Output Through the Business Cycle, Ontario 1978-1998

Builders

Cycle		1982	% of 1982 Firms	1987	% of 1987 Firms	1987 as % of 1982
1978-1987	Persisters*	1135	45	358	10	32
	Gross Entrants(1979-)	1372	55	237	7	17
	Total Firms	2507	100	595	17	24
		1987	% of 1987 Firms	1991	% of 1991 Firms	1991 as % of 1987
1982-1991	Persisters*	595	17	298	10	50
	Re- Entrants(1983-)	237	7	73	3	31
	New Entrants(1983-)	2761	77	704	24	25
	Total Firms	3593	100	1075	37	30
		1991	% of 1991 Firms	1998	% of 1998 Firms	1998 as % of 1991
1987-1998	Persisters*	1075	37	469	16	44
	Re- Entrants(1988-)	105	4	19	1	18
	New Entrants(1988-)	1705	59	299	10	18
	Total Firms	2885	100	787	27	27

Dwelling Units

Cycle		1982	% of 1982 Units	1987	% of 1987 Units	1987 as % of 1982
1978-1987	Persisters*	10359	54	12064	23	116
	Gross Entrants(1979-)	8967	46	5930	11	66
	Total Firms	19326	100	17994	34	93
		1987	% of 1987 Units	1991	% of 1991 Units	1991 as % of 1987
1982-1991	Persisters*	17994	34	4537	20	25
	Re- Entrants(1983-)	1805	3	540	2	30
	New Entrants(1983-)	33455	63	4937	21	15
	Total Firms	53254	100	10014	43	19
		1991	% of 1991 Units	1998	% of 1998 Units	1998 as % of 1991
1987-1998	Persisters*	10014	43	8229	21	82
	Re- Entrants(1988-)	273	1	121	0	44
	New Entrants(1988-)	12894	56	4532	11	35
	Total Firms	23181	100	12882	33	56

*Defined as present in the first year of the cycle.

Source: Ontario New Home Warranty Program

of re-entrants, as distinct from new entrants, which diminished in members but which best maintained their output levels up to 1991.

For the cycle beginning in 1987, the overshoot in firm entry after that year did not have the same effect as the massive firm entry of the 1980s. Rather, this cycle, much like that beginning with a downswing in 1978, favoured persisters' numbers and output. As for the previous two cycles, persisters and entrants would become a minority, but the former again proved more successful. Once more, the performance of a small group of re-entrants was better than new firms, though not quite like that of persisters.

From these three cycles, two beginning with downturns and one with an upturn, we can identify a number of similarities and differences. All are similar in that firms present at the beginning stages--whether an upturn or downturn--always became a minority of companies. However, the type of cycle seems to introduce some variations: for those beginning with a downturn, incumbents went on to dominate in firms and output. This suggests that they are in fact better able than new firms to resist the conditions that compel exit, despite becoming outnumbered through periods of output growth and decline. With the cycle that began with the 1980s boom, the sheer number of entrants ensured that they would remain numerically dominant in 1991. But they still lost proportionately more firms and output share. Thus, whereas isolated periods of expansion and contraction favour new firms, complete cycles reveal the relative stability of persisters. In fact, entrants turned out to be the least stable, behind re-entrants which withdraw and re-appear to hold on to their output levels. While there is a hint of stability in the favourable performance of persisters through entire business cycles, and among

firms that withdraw and re-enter, the overall loss in firm numbers through time reinforces the theme of transience. Most firms at the end of each business cycle are those born in its latter stages, regardless of the direction of change. More generally, few firms last long in housebuilding, so that business cycles may accelerate firm additions and removals, but do not promote advantages among existing companies at any stage. Time whittles away firm persistence, and introduces new companies in their place.

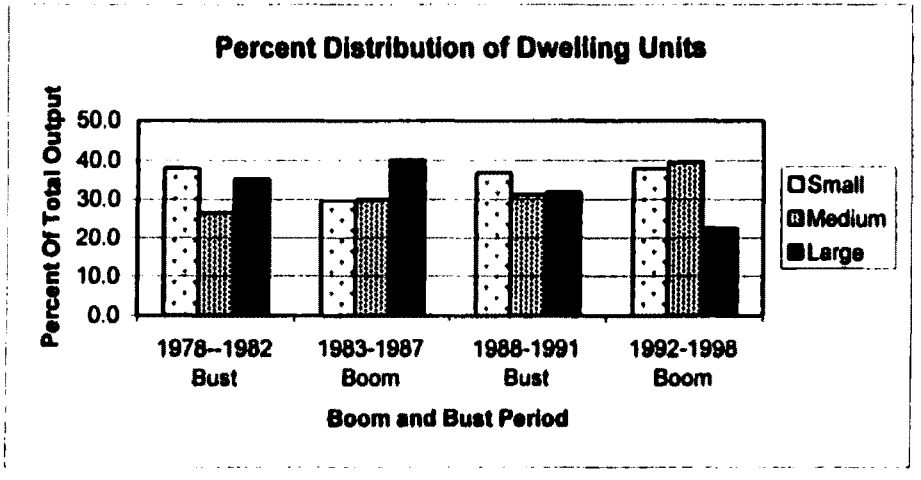
This leads to a reconsideration of the structure of the housebuilding industry, in light of the dynamics of change by firms of different status. An apparent paradox of this transience is that high firm turnover characterises firm membership in housebuilding as unstable while at the same time the structure of the industry is consistently deconcentrated. One might expect to find that a select few firms are favoured in the competitive process, perhaps endowed with entrepreneurial or administrative skill and good fortune, to emerge as dominant players. As shown in the previous chapter, this has yet to happen, even amongst the largest and presumably most capable. Periods of output change, either up or down, also have little impact on the industry's size structure (Table 5.6).

Just as consistent deconcentration might mask massive turnover, it could also hide a longer term reorganisation which has taken place since the mid-1980s (Table 5.6). A 1983 federal study by the Small Business Secretariat of the Department of Industry, Trade and Commerce predicted that builders were headed for tougher times.[9] Whereas the 1970s were characterised by easy entry, it was argued, the 1980s would bring higher firm failure rates. It was argued that company mismanagement was as much to blame as

Table 5.6: Firm Size Structure in Housebuilding in Booms and Busts, Ontario 1978-1998

Percent Distribution of Firms

		1978--1982 Bust		1983-1987 Boom		1988-1991 Bust		1992-1998 Boom	
Size Class									
Small	1	35.0		31.6		37.9		33.0	
	2 to 10	48.8		46.0		45.2		46.2	
	11 to 25	9.0		11.5		8.7		10.4	
	Sub-total		92.7		89.0		91.8		89.6
Medium	26 to 50	3.8		4.9		4.0		5.7	
	51 to 100	1.9		3.4		2.4		3.2	
	Sub-total		5.7		8.3		6.4		8.9
Large	101 to 200	1.0		1.9		1.3		1.1	
	>200	0.6		0.8		0.5		0.3	
	Sub-total		1.6		2.7		1.7		1.5
	Total		100		100		100		100
	Average No. of Firms		2924		2615		3952		2967

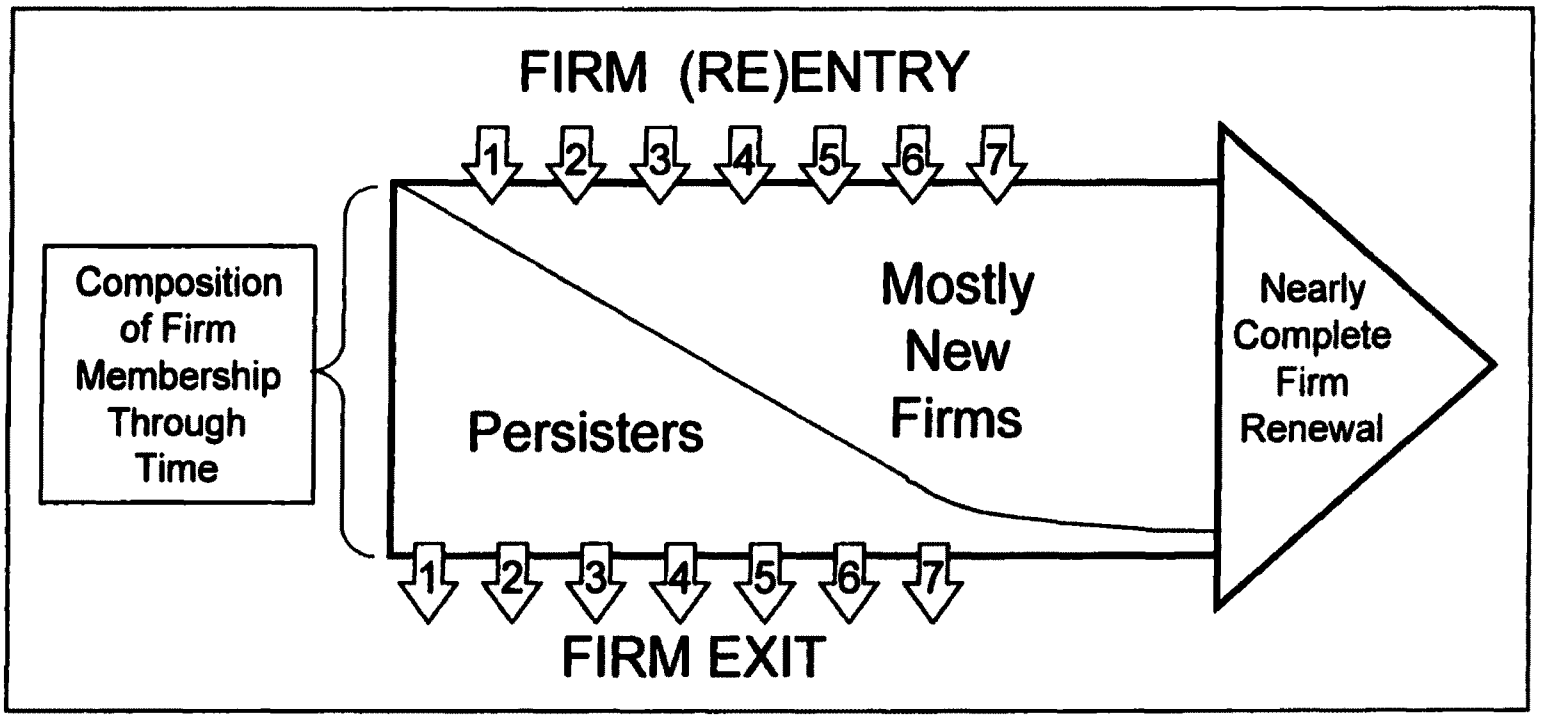


Source: Ontario New Home Warranty Program

the state of the economy. In Ontario, entry remained easy in the 1980s, but the latter part of the decade also removed an unprecedented number of builders. Into the 1990s, firm numbers did eventually stabilise (though membership did not), at the same time as output rose. Whereas firms and output had largely moved in unison over the study period, now a more stable number of companies were producing a rising share of units. It was the medium-sized builder class that made market share gains at the expense of their larger counterparts while small firms held their ground. These trends suggest a reorganisation of the industry rather than a cyclical change, reinforcing the point that housebuilding lacks the dominant large firms required for long-term concentration. In fact, as medium-sized firms gained into the 1990s, concentration levels fell as shown earlier.

We have seen in this chapter that firm transience is a defining feature of Ontario's housebuilding industry. The inability of large numbers of builders to remain active for very long marks the industry's firms membership as unstable. Periods of expansion and contraction, and business cycles, renew firm membership. But if economic conditions hasten firm entry and exit, they are unnecessary to spur turnover. Whether during a boom or bust, the cumulative effect of annual firm turnover leads to near complete firm renewal in the medium term. (Figure 5.3). Small firms in particular constitute most turnover, constantly streaming into and out of the industry. Again, one might expect that larger builders would be more stable and better able to capture growing market share. But such is not the case. According to an employee of Campeau Corporation, the massive Ontario-based builder-developer and retailer of the 1970s and 1980s, his employer could sink just as quickly as the ill-fated Titanic.[10] In contrast, at the margins exists a crop of

Figure 5.3 The Cumulative Effect of Annual Firm Turnover



Notes: At Year 5, few builders that have exited return,and incumbents come to share market dominance with new firms. After Year 7, new firms have replaced all but a handful of incumbents.

flexible and stable builders ready to withdraw and re-enter the industry. Together, deconcentration and firm transience coexist as defining features of housebuilding.

5.4 Conclusion

If small firms constitute most turnover in housebuilding, why should the largest companies be unable to capture ever more market share and raise concentration? Might it be attributed to an inability among the large players to grow? Perhaps the answer is found in builders' operating method and strategies. Could the Small Business Secretariat be right in blaming mismanagement for firm failures? Or might it be a feature of the social system of production, such as a lack of advantages to economies of scale? While the data analyses have to now presented aggregate features of the industry, they cannot answer these questions. For answers, one must look inside the 'black box' of the housebuilder. It is at the level of the firm, it is internal structure, operating methods and strategies, that the seeds of explanation for deconcentration and firm transience are found. The following chapter therefore complements the data analysis in presenting the results of interviews with selected builders in Ontario's largest housing market—Toronto.

Notes

[1] Ernie Assalay, "This Question of a National Warranty for Homes—HUDAC Will See it Through," *Canadian Builder* 24 (April 1974): 47.

[2] The National Home Builders' Association in Canada had changed its name to HUDAC in 1971 to reflect the changing composition of its membership. As this change happened, the NHBA has to issue reassurance to its small builder members that they would continue to be represented by their national association.

[3] Staff, "Builders' Warranty for Homes—First Britain, Then USA, Next Canada?," *Canadian Builder* 25 (June 1975): 53.

Notes

[4] Walsh does not distinguish between firms that have entered housebuilding for the first time, or re-enter after a period of absence. Similarly, he does not distinguish between permanent exists or temporary withdrawals. The effect is inflate the overall turnover.

[5] The data Ball used do not classify self-employed proprietors as constituting 'firms' proper. Given the high numbers of such establishments in the industry, Ball notes, turnover is vastly undercounted in bankruptcy data.

[6] The inclusion of developers in the survey would inflate firm age relative to housebuilders since the former do tend to be far more stable. However, the data also over-represent the longevity of all firms by not weighting the average ages reported according to the numbers of companies in each size class in the survey. Thus, the average age of the largest firms is treated as equal to that of their smaller counterparts, even though the latter are far more numerous.

[7] As discussed in Chapter 3, exits are defined as companies that permanently leave housebuilding to never return again. Withdrawals, on the other hand, temporarily leave housebuilding and return after some defined period of absence. Here, withdrawals are those companies which withdrew before 1982 and returned after that year to build again. In both cases, firms are identified as present in the industry up to the year of their disappearance, and exclusive of persisters from 1978.

[8] Since the data begin in 1978, entrants cannot be separated from re-entrants.

[9] Tom Messer, "Canadian Bankruptcies Analysed by Feds," *Canadian Builder* 33 (January-February 1983), 32.

[10] Anonymous note, as taken from the Financial Post, no title, *Canadian Builder* 39 (July-August 1989), 12.

Chapter 6: Firm Organisation, Operation and Strategy

The research results presented to this point in the thesis have been concerned with the firm size structure of housebuilding in North America, with a focus on the Ontario case. A synthesis of data in the literature, and more importantly the ONHWP data for Ontario, have been used to show that housebuilding is an industry at once consistently deconcentrated and yet composed of very transient firms. To complement these findings, this chapter presents an analysis of twenty corporate interviews with a selection of builders in the Toronto Census Metropolitan Area (CMA). The interviews, which were carried out in 2000, allow insights into the organisation and operation of builders. From this analysis, we can begin to explain why it is that housebuilding remains so deconcentrated and its firms unstable.

The analysis in this chapter is based on the interview schedule included as Appendix 1, and follows the general sequence of questions as outlined in Chapter 3. First, similarities and differences between builders of different sizes are discussed in terms of their internal organisation and operating methods. This is followed by a discussion of firms' corporate and competitive strategies, both to understand their organisation and operation and to suggest reasons why housebuilding remains a deconcentrated industry of transient firms.

The builders interviewed were larger, on the average, than those in Ontario as a whole (Table 6.1).[1] To some extent, this is due to greater concentration among all Toronto CMA builders, owing to the location of the province's largest builders in this market. As discussed in Chapter 3, however, the overrepresentation of large firms in my sample is intentional, resulting from the goal of obtaining the same number of interviews from each size class. This allows for better comparisons in firm organisation, operation and strategies across size class, an impossible task if interviews were sought for a representative sample. In this way, interviews with selected Toronto builders serve as a manageable context in which to examine these aspects of housebuilding in Ontario, in the same way that Ontario was used in the previous chapters as a case study of residential construction in North America.

6.1 Firm Structure and Operating Methods

The first purpose for interviewing builders was to examine whether internal firm structure varies according to company size. As discussed in Chapter 2, firm size may be measured in several ways, including number of employees. Given the level of outsourcing in construction, employment figures vastly understate company size in this industry, which explains why output in annual units is the most common measure used. However, employment data do provide insights into the structure of individual companies, in terms of how salaried staff may be assigned to different firm functions and, more broadly, what functions a firm carries out internally versus those that it outsources.

Table 6.1: Size Distribution of Housebuilders: Interviewees, Toronto CMA, Ontario Housebuilders, 1998

	Interviewed Firms		Toronto**		Rest of Ontario***		Total Ontario	
Size Class**	No.	%	No.	%	No.	%	No.	%
Small	7	35	668	74.7	1806	91.3	2474	86.1
Medium	5	25	183	20.5	158	8.0	341	11.9
Large	8	40	43	4.8	14	0.7	57	2.0
TOTAL	20	100	894	100	1978	100	2872	100

**Builders based in the Toronto CMA, some of whom may also build outside of the CMA. However, all of the firms interviewed carry out most of their building activities within the Toronto CMA, including the largest companies.

**Small builders, completing 1 to 25 units per year; Medium 26 to 100; Large more than 100

***Includes builders located outside the CMA that could be building in Toronto.

An examination of employment is therefore a basis for comparison between companies of different output sizes in the sample of interviewed builders.

As shown in Table 6.2, although the average number of salaried employees[2] per company was 36, this varied widely according to firm size class. Three of the eight large builders contained an unusually large staff complement. One would expect more employees in larger firms, but this was not the case: the remaining five companies in this class averaged only thirteen employees. In one interview, I was told that the company built an average of 120 units per year, but it employed only twelve salaried staff.[3] Another builder was even 'leaner', building 250 units per year with just five full-time employees.[4] A third informant explained that his company aimed for an annual output range of 750 and 800 units, doing so with a meagre staff of eight.[5] Excluding the three largest builders, the remaining seventeen companies averaged only seven employees. However, when we take into account the volume of business carried out by the largest builders, ranging from $160 million to $400 million per annum, even their greater staff complement seems small.[6] If these three builders are exceptions, it appears that there can only be minor differences in the internal structure of most interviewed builders.

An examination of output and employment highlights some differences between firm size class, but confirms that there is little variation in the internal structure of builders. Unlike the average number of salaried employees, average units per size class is a more representative measure of the range of builder sizes in the interviewed sample (Table 6.2). Both the number of units and their averages within each size class resembles the discussion of firm size structure in Chapter 3. Output per builder ranges widely

between the small and large classes, with medium builders in an intermediate position. However, when we correct output with the number of employees within each class, we find more similarities than differences. Including the three large builders with the most employees, medium and large builders are virtually the same in terms of the average number of units produced per employee. Here, it is small builders rather than the three largest ones that stand out from an otherwise homogeneous group. Given that most large builders do not appear to need many salaried employees to produce their volume, and that additional staff do not appear to introduce greater efficiency, it follows that internal firm structure varies little. Apparently, it need not for output to rise.

Maintaining few employees, and apparently needing few even to build large quantities, it is not surprising to find that few companies had formal organisational responsibilities assigned to different departments or units. One large builder, producing high volume with only eight employees, came closest to having an organisational chart; his firm had an employee responsibility handbook (no formal name) which outlines the various tasks assigned to each individual in the company. However, I was told that the handbook goes unused.[7] Of the three companies with the largest staff complement, only two had formal departments, such as accounting; the third devolved responsibility to the various work sites, particularly to site superintendents/foremen who carry out well-defined administrative tasks. Medium-sized builders could also have formal responsibilities assigned to different individuals, but administrative departments are non-existent. In total, eleven informants stated the following: that their companies' employees filled different roles at different times; that there was no clear division in

Table 6.2: Number of Salaried Employees by Size Class of Builder, Toronto, 2000

Size Class*	No. of Companies	Total No. Of Employees	No. Employees/ Company	Total No. Units per Year	Avg. Units per Company per Year	Avg. Units/ Employee
Small	7	27	3.9	69	9.9	2.6
Medium	5	29	5.8	270	54.0	9.3
Large	8	666	83.3	5621	702.6	8.4
TOTAL	20	722	36.1	5960	298.0	8.3

*Size Classes are: Small builders, completing 1 to 25 units per year; Medium 26 to 100; Large more than 100.
Source: Interviews with Toronto builders, 2000

employee responsibilities; that staff could not be easily classed by firm task/function; and that departments were non-existent. Of the remaining builders, six answered that questions relating to firm organisation were simply "not applicable".

To find that firms of all sizes can be organised with such simplicity begs the immediate question as to why this is so. To answer this question, we must consider how firm structure results from (and reinforces) building methods. The organisation of the building process is central here.

We find that, just as firms differ little in their internal organisation, they also operate in much the same way, regardless of their level of output. Table 6.3 presents the types of tasks carried out by builders or outsourced to contracting firms, divided into administrative and production work. Within these two categories, each task is assigned an ordinal rating of percentage of work subcontracted--low, medium, or high--versus that which is executed by the builders themselves. The table shows that builders subcontracted a large share of their administrative work, 41% on average, though varying widely. Legal and architectural tasks were contracted most often, owing to their specialised and certified professional nature and the ease with which these producer services were available not just to housebuilders but in the private sector in general. Medium amounts of subcontracting go to less specialised tasks such as marketing functions and accounting, the latter of which could combine day-to-day bookkeeping with outsourced auditing, for example. The least amount of subcontracting went to tasks that related closest to the erection of houses. Site supervision was rarely contracted; executive/management and operating tasks were always kept in-house. Thus, if a large

Table 6.3: Work Categories and Outsourcing Among Interviewed Builders, 2000

Proportion of work outsourced

Administrative*

	Total No. of Responses**	Sub-Contract No.	%	% of Work Outsourced***
Executive/Management	18	0.0	0	None
Operations	17	0.0	0	None
Site supervision	17	0.5	3	Low
Market Research	16	5.5	35	Medium
Accounting	19	8.5	45	Medium
Advertising	18	9.0	50	Medium
Sales	20	12.0	60	Medium
Legal	20	16.5	83	High
Architectural	19	17.0	89	High
Total Administrative	18	8	41	

Construction

	Total No. of Responses**	Sub-Contract No.	%	% of Work Outsourced***
Framing (incl. doors and windows)	20	17.5	88	High
Drywall	20	18.0	90	High
Finish Carpentry	20	19.0	95	High
Flooring	20	19.5	98	High
Other finish work	20	19.5	98	High
Foundations	20	20.0	100	All
Roofing	20	20.0	100	All
Plumbing	20	20.0	100	All
Electrical	20	20.0	100	All
Total Construction	20	19	96	

*In this category of firm functions, the total number of responses does not equal twenty, either because informants did not answer or because the specific firm function was not applicable, as in cases where companies do not claim to perform market research, for example.
**In some cases, firms indicated that a specific function was both carried out internally and subcontracted. In these cases, that firm was assigned to both in-house and sub-contracted work for that function.
***The ordinal categories are defined as: 'low', below 33% outsourced; 'medium' 33% to 67% subcontracted; 'high' above 67% subcontracted.

Source: Interviews with Toronto builders, 2000

share of administrative work is outsourced, it varied according to how specialised the specific task was and how closely it was related to the actual production of houses.

From these figures, it appears that builders maintained in-house managerial work related to the operation of the building process. Specialised administration, which did not affect production and strategic matters, was outsourced.[8] In fact, several informants supported this interpretation: "We can do that"[9], replied one informant when asked about general administrative work. Another put it this way: "You can move from discipline to discipline if necessary. You can take more various operations under one hat, if you will. A carpenter's a carpenter and he can't do plumbing, a plumber's a plumber and he can't do electrical, usually."[10] Another builder affirmed the same outlook: "My philosophy is that you can't be good at everything, you can only be good at one particular thing. So, if I'm good at running a job and making sure it runs smoothly, that's where I'm gonna concentrate on."[11] Others went further:

> We keep our own employees for site supervision. That's quality control. We know what they're capable of, they know what we're looking for, they know what our standard is, they know what's acceptable. That gives us management of the site. We maintain a service guy. I'd say we have one labourer, we've had him for a long time, keep him busy, he's a talented guy. That's the minimum; you need your own super to run a site.[12]

> [administrative work] is more tied into, you know, exposure, marketing, sales, knowing what's going on. The actual building of the house is really not the forefront of things. The job will take care of itself if it's organised properly, if you know what's going on, if the management is in place. You don't need to be there to know that four nails were put into that baseboard. You don't need to do that if the people you hired are okay. [Management] is more bottom line things, and [construction] is more of a trust thing.[13]

These comments suggest that management is not only kept in house because it can be done, but also because it forms the core of the building firm. Specialised tasks, administrative or otherwise, are not carried out internally. With management in place, the construction of houses, it would seem, is a matter of administrative coordination.

If a large proportion of administrative work is outsourced, it pales in comparison to that for construction work. It is here that we begin to see how builders can be so streamlined, and why their industry is so distinct in industrial organisation. With only minor exceptions, virtually all construction is subcontracted, 96% percent on average. The least amount of contracted work, though still 88%, is for house framing. As one informant from a small-sized firm recounted: "I do some of my own framing, you know, I do some trim carpentry. But everything else is basically subcontract. We used to do a lot more framing. We sub it out now. Actually, the guys that used to frame for me, they're now my framing contractor."[14] All other tasks, for this builder and the others, were let out to other companies. Far from achieving any degree of internalisation, housebuilders, despite their name, possess no productive capacity. These are indeed lean and streamlined organisations.

Given the high degree of outsourcing, mainly production subcontracting, we find that there was little difference in operating methods between firms of different sizes. Table 6.4 presents the amount of outsourcing within each firm size class, combining the ordinal classification of tasks shown in Table 6.3 into groups of outsourced work. For administrative work and even more so for construction, there were few differences to speak of. No firm size class shows a significantly greater or lesser tendency to outsource

Table 6.4: Subcontracting by Size of Builder, Toronto, 2000

Proportion of work outsourced

Administrative Work

Category of Work*	Size Class of Builder** Small	Medium	Large	Total
Low	0.0	0.0	1.9	0.7
Medium	52.1	50.0	50.0	50.7
High	47.9	50.0	48.1	48.6
Total	100.0	100.0	100.0	100.0

Construction Work

Category of Work*	Size Class of Builder** Small	Medium	Large	Total
Low	0.0	0.0	0.0	0.0
Medium	0.0	0.0	0.0	0.0
High	51.7	55.6	54.9	54.0
All	48.3	44.4	45.1	46.0
Total	100.0	100.0	100.0	100.0

*Category of work refers to the classification employed in Table 4.
**Size Classes are: Small builders, completing 1 to 25 units per year; Medium 26 1to 100; Large more than 100.

Source: Interviews with Toronto builders, 2000

work of any kind. Again, the insights of builders are telling. For one small builder, "what happens is, I can do a lot, but when you start two and three projects..., you end up having people waiting for you." Large builders said much the same, one stating that "we're not in the plumbing business, and we're not in the electrical business",[15] a second stating "I don't have any machinery, I don't have any trucks. I have money. I go out and buy some lots, I hire other people to do everything, and I make the profits."[16] A third large builder put it this way:

> It's all subcontracted, save for site supervision [why not integrate?]...our industry is not set up that way. We're a builder, we're not a roofer, we're not a framer. The difference is basically we've never been electricians, we've never been an electrical company, so we wouldn't want to do our business that way. Homebuilding is set up so that the builder basically is the management side of building the house, and subcontracting is the construction side of it. [would your company ever integrate?] I don't think so. We see ourselves as schedulers and quality control. The trades do the actual construction work.

Thus, we see through firms' operating methods why internal firm organisation varies little. Regardless of firm size, builders subcontract production work and specialised administrative functions while maintaining tighter, in-house administrative control to oversee the production process. Whereas we might assume that the core, value-added function of the housebuilding company is the actual construction work in building homes, in fact it is not. The core function of the housebuilding firm is the management of the building process. That the industry is indeed simply 'set up this way' was a common sentiment: "That's how most other builders do it. We sub out the work and we just supervise. From my experience, that's the way it's pretty much worked. You sub out your framers, your concrete, whatever."[17] Another builder, running his own

medium-sized company for over ten years and working in the industry for over thirty, stated that his operation was "like most builders in Toronto", in subcontracting all construction work.[18] He continued:

> If you go back years and years ago, a lot of builders had larger staffs, and they had maybe their in-house carpenters doing the framing, and they might have in-house plumbers in those days, maybe not, probably mostly carpenters. But I think over the years, the changes in the industry all happened to maximise the bottom line and minimise exposure. So it's just a history of the way the construction industry changed.

In the above quotations, not only do we see that builders are organised and operate in much the same way, regardless of size, but we also begin to see explanations for these similarities. In effect, builders are, and have long been, management companies, skimming from the value-added activities of their subcontractors but conducting their primary business in the administrative coordination of construction. Builders carry out managerial functions directly related to the construction process, while they outsource most of the remaining administrative work. Production subcontracting relieves builders of the need to have complex organisational structures, while it also makes their operating methods remarkably similar. For these reasons, the organisation and operation of interviewed builders can be described as lean and hierarchically flat. We now turn to explanations for the similarities between firm size class which, in turn, help us to understand why housebuilding remains so deconcentrated.

6.2 Explaining Industry Structure

6.2.1 Subcontracting and Corporate Strategy

Outsourcing, especially of production, is ubiquitous. But the impact of subcontracting is broader: the interviews reveal that subcontracting is the foundation of builders' strategies, strategies which also explain why the industry should remain so deconcentrated.

Why is subcontracting so common? Why do builders not internalise production labour? The answers to these questions, contained in the comments of informants, centre around the need to modulate productive capacity for the market, particularly the aversion to being over-invested during slow-downs. "When we slow down, we won't need the trades...construction fluctuates with time"[19] stated an informant of a large firm, another echoing that "The ebb and flow of the construction would mean, in order to be competitive, we'd have to be hiring and laying off, because our projects don't necessarily always run steady."[20] Medium sized firms feel the same pressures: "It's more efficient to use a subcontractor because it's on demand. Otherwise you'd have employees that would be coming and going...Building activity varies, production-wise. You'd need thirty houses at least going at one time."[21] Another medium sized builder stated "I don't think we're busy enough. We only build 35 to 40 homes a year. Can you keep these guys busy building 25 homes a year?...They come in for a few days, it's all you need them for, and then they're gone."[22] Small firms, too, offered similar explanations: "You'd have to do a larger volume...I could buy 300 or 400 lots, keep'em busy for three

or four years, but then what happens?"[23] said one informant, another similarly stating "...you gotta have massive amounts of houses to build. Even those that build 2000, 3000 houses a year, they can't do it in house."[24] Others added "if I have permanent staff, then I definitely have to have the work to pay them"[25] and "it's seasonal, I cannot employ employees if there's no point, no work."[26] Whether seasonal or cyclical, firms large and small regard subcontracting as a means of responding to the market by adding capacity during growth and scaling down in decline. In particular, builders want to avoid being penalised for having fixed overhead which goes under-utilised when the market slows.

Coupled with builders' ability to remain responsive to the market by use of subcontracting is their justification that subcontractors also bring external economies and expertise which are difficult to internalise. Here too, builders of all sizes are represented. For one, "you get a good price for some of these guys, so retaining them doesn't pay."[27]. Another said "If I have to buy materials and install it myself, I...can do it , but I can't do it for the cost."[28]. A third stated simply "it's more cost efficient."[29] Some builders recognise both benefits: "...when you find various people that you really work well with, unless you notice a decline in their hours, abilities, dedication, you stick with'm. Because you're on the same wave length and that means efficiency."[30] Another offered a specific example: "[electrical] requires special supervision...So rather than take on the responsibility of having these people on staff and overhead that goes with them, you rely on the trades, so you're free to move and adapt to where the activity is."[31] Other informants singled out contractors' expertise: referring to the trades, one informant commented "some of these things are very specialised, so we need that expertise"[32];

"[trades] know how to pour the concrete, they know how to form the walls, and it becomes the responsibility of the contractor."[33]; "if I knew I could do plumbing better than my plumber, I'd do plumbing. But I know I can't so I let my trades do what they're good at."[34] Notably, several builders said many of the same things regarding outsourcing of specialised administrative tasks. They recognise the advantage of market responsiveness inherent in this approach.

The same logic was expressed by informants when asked about construction tools, equipment and building materials. Only 4 of 19 builders who replied indicated that they had their own, mostly small, construction equipment: "We have only one little back-hoe"[35] noted one builder, a second stating "I have some small machines, but nothing heavy."[36] Another builder explained why his company no longer owned any equipment: "At one point, we had a blade, front-end loader. The cost of maintaining it, keeping it operating, on staff all the time wasn't worth it for us. We were spending more money repairing the machine than it would [cost] renting it on an as-needed basis."[37] Moreover, equipment would also be used for activities outside of housebuilding as well. Most stated that trades supplied their own equipment. Similarly, for building materials, firms relied either on the supplier or on 'supply and install' contracts with the trades. None produce materials. This builder's comment is typical: "...lumber will come from the lumber company and the carpenter will come and install it. But the other items, concrete, the forming guy, it's his contract to supply and install. The majority is supply and install."[38] As with tools and equipment, this relieves builders of the need to invest in the overhead

that is required to produce and handle materials, and therefore potential overcapacity. As one informant put it:

> ...that's part of this whole general switch in the industry over the last twenty years. Builders don't want to have anything. I don't want to have a D-8 sitting in a yard somewhere that I have to maintain; that is expensive...Basically what the builders have tried to do over the years is to become the pure general contractor...so all I have is I have this office here, I have my sales pavilion...and that's it. I want to have as few employees as possible, and as many contractors as possible so I know what my costs are.[39]

In the face of constant market turbulence, then, outsourcing--mainly production subcontracting--remains an attractive option for builders. This practice is the springboard of firm strategy, operations, and more. An examination of firm strategy reveals that subcontracting forms the basis of firms' decisions regarding which markets to engage, and how specifically they should compete within housebuilding. Out of these decisions come not only the similarities in firm organisation and operation, as shown above, but also the persistent market deconcentration.

As shown in Table 6.5, corporate strategic decisions—those centring around which markets to engage—seem to change with firm size class, mainly between the largest and smallest companies. Small firms tend to be less concerned with integrating activities along the housebuilding value chain, such as land development. Medium and large builders are more likely to integrate vertically, though half also indicated that they diversify into related activities, such as renovation work. Given the simplified firm structure of builders of all sizes, even those activities which are 'integrated' are done so only administratively, not through internalised capacity. Whatever differences may exist between firms, mainly small and large ones, are likely attributable to whether a firm's

Table 6.5: Corporate Strategy and Firm Size, Interviewed Builders, 2000

	Corporate Strategy*			
Size Class***	Total**	Diversification(1)	Diversification(2)	Integration
Small	7	6	0	2
Medium	5	3	1	4
Large	8	4	1	6

*Refers to firm decisions about which markets to engage. Diversified (1) refers to the strategy of engaging related construction activities, such as renovations. Diversified (2) refers to the decision to engage unrelated markets, such as waste management. Integration refers to the internalization of activities related to the delivery of new houses, such as land development.
**Choices about strategy do not equal the total number of firms within each size class because firms could choose to engage more than one strategy.
***Size Classes are: Small builders, completing 1 to 25 units per year; Medium 26 to 100; Large more than 100.

Source: Interviews with Toronto builders, 2000

corporate strategy is to diversify into related markets or integrate activities directly associated with housebuilding. Given the strategies identified here, it follows that the addition of salaried employees aids in vertical integration, as the associated overhead is spread over a number of different activities.[40] Still, integration only at the administrative level makes the logistics of this strategy hardly different from diversification, requiring minimal internal capacity. Rather, integration is undertaken via subcontracting. As stated by one large builder, "...there's not always enough work to keep [in-house labour] busy, and we're not in that business...You decide what type of business you want to run. We're not looking to run a massive integrated business."[41] Another large builder, referring to several lines of business that his company once had integrated, said;

> Remember I told you I was in other businesses? To vertically integrate my company [doesn't make sense], when things slow up for example, like my basement/foundation business. If I didn't have any foundations to pour I'd have to find another builder to pour for and there's no point owning a company, being in that business, chasing people around, trying to collect money. It was a waste of my time and it wasn't profitable enough. So I'd rather just have guys when I need them...[42]

Subcontracting, then, forms the basis of firms' ability and willingness to pursue either integration or other markets, with few costs to movements in either direction and returning to housebuilding. In doing so, some choose to focus not only on the management of the building process, but also the management of 'switching' between alternative markets. In general, without a dedicated focus strictly on housebuilding, the industry appears to be devoid of players which take direct aim at competitors, seek competitive advantages, and therefore, possess the desire to dominate the market for new houses, including large firms. In the context of these decisions, we begin to see why

concentration appears not to be in the future of housebuilding. Deconcentration, in the absence of large firm dominance and continued small firm presence, is ultimately based on the desirability of, and option to, subcontract work.

As discussed in Chapter 5, deconcentration also reflects the continued entry of new companies into the industry. Here too, subcontracting is the principal explanation, facilitating new firm formation by reducing barriers to entry. First, subcontracting minimises the need for technical knowledge, which is key for new entrants. Administrative coordination is the major technical requirement. Second, and equally important, subcontracting minimises the costs of entry, reducing them to the arrangement of payment terms with suppliers and trades, when land purchases are not required. For these reasons, seventeen informants said that it is easy to enter the industry: "Yes, anybody can start a building company, it's not difficult.."[43]; "...I think it's too easy"[44]; "There's no limit."[45]; "Anybody can try it."[46]. The role of subcontracting was also acknowledged: "Well, there are builders, became builders in the last few years, because of the market. They don't know anything about it, but hire people that do...That's a way to enter the industry. There's a lot of it."[47] Similarly, another builder commented "If you're good at handling people, you can read people, you do your work, go see what type of job they're doing...on another job, I don't see if you're on the ball why you couldn't do it."[48] A third builder put it best:

> Everybody knows about houses. In that way, it's not a difficult thing to learn. It's not technological, or very difficult to understand. It's not a difficult process to build a house. I think that takes a lot out of it. The trades make it a lot easier, on the site. They know exactly what they're doing. You just gotta keep an eye on them...you just need someone to coordinate it.[49]

To be sure, most informants cautioned that there are indeed barriers to entry, many of the same kinds of factors which lead companies to failure. "...it's easy to build, but to become a builder it's not."[50]; "it's not easy to become a competent homebuilder."[51]. Others still recognised that builders can grow too quickly, run less-than-desirable operations, or over extend themselves: "It was easy [to enter], but it's becoming a lot more difficult. It's requiring more technical knowledge, operation has become a lot more sophisticated...More reporting, more accounting, more health and safety, more labour requirements."[52]. Perhaps too heavy a reliance on subcontracting—that which facilitates new firm entry—can also lead to failure: "[a job site] doesn't run by itself. It still takes my effort, my time. You don't just call the subcontractors to do the work."[53]; "Takes a lot of coordinating. You have to know the technical side as well. Not just relying on trades. You're supervising them."[54] This, together with several informants' feeling that it is easy to withdraw from the industry, suggests why entry is indeed counterbalanced by exit, as described in chapter 5.

This leads to a consideration of yet another group of builders identified in Chapter 4: those who withdraw and re-enter, usually displaying greater long-term stability. Indeed, here we see the epitome of the nimble and lean housebuilder, not just surviving but thriving through a reliance on subcontracted production work. Withdrawal is made easy by the lack of invested overhead, especially in productive capacity, while firms' administrative cores can be redeployed to other markets, related or otherwise. As with new firms, re-entry is facilitated by turning attention back to housebuilding and re-engaging that outsourced productive capacity. And since these kinds of companies are

more familiar with the social system of production, it is not surprising that they were shown to be more stable in Chapter 4. In the interviews, this issue arose in relation to questions on approaches to market cyclicality. Builders of all sizes noted several strategies, some contradictory, such as moving from speculative building to custom, or vice versa, and changing the scale of their operations. But several builders also engage withdrawal and re-entry strategies. Given the selection of long-time stable builders, this is one way that they remain in housebuilding. For one builder, "if the market shrinks, obviously we have to shrink or we'd be out of business...we wouldn't even start building on a conditional sale if the market was weak enough."[55] Another said "It's not my decision. I have had a few years that I haven't built, but I can't get the customers, so it's market driven...".[56] Others stated that lulls in housebuilding would be offset by ongoing work in other activities, such as renovations, industrial construction or waste management. The comments of these two informants capture these approaches best:

> [We withdrew] not because times are so bad [but] because we're strategizing. We spent quite a few years servicing, engineering and development, and that was all in preparation in realising the market was gonna pick up, and to make sure those lots were ready when we wanted them. In '93, '94.[57]

> Oh ya, in bad times, we'll build what the market will take. Some years we don't build any homes...we'll go on hiatus. Slow down a little bit, slow down a lot. There's years where we build 200 homes, 250 homes also. It averages out. '92, '93, ya pretty well two years, there was no houses built, we were just existing, we had done a little renovation, a small job somewhere, our staff was down to nothing.[58]

The latter informant went on to explain how the company's current project began tentatively out of the recession of the early 1990s, with a resumption of construction on banked land that sat dormant since it was serviced in 1989. For this company and the

others, withdrawal could be intentional or market driven but in either case, it is used to confront the changing needs of the firm, and is followed by re-entry.

Through subcontracting, then, the maintenance, entry and re-entry of small firms ties together the industry's persistent deconcentration and firm transience. All builders, not just small ones, choose to remain lean and flexible because subcontracting allows it and market instability makes that choice the most viable. From this perspective, internal firm organisation and operating methods vary little, whether builders are producing twenty or 2000 homes per year. These features of industrial organisation clearly distinguish housebuilding firms and their industry from most others, especially those which tend to receive rather more attention in the industrial literature. But one question remains: if subcontracting facilitates industry deconcentration and firm transience, particularly as it provides a useful risk averse market approach, how is it that builders actually compete with one another?

6.2.2 Subcontracting and Competitive Strategy

Firms' flexible and responsive corporate strategy, and their reliance on subcontracting in the face of market turbulence, conditions how builders compete within housebuilding. We have seen how builders' primary concerns lie in the management of both corporate flexibility and the production process, rather than the production of houses *per se*. Therefore, it is in these managerial tasks--in the realm of decision-making rather than in construction tasks--that we find the sources of competition between companies.

Here too, in the decisions made by builders, we find that housebuilding is distinguished from other industries, including their influence over industry structure.

As discussed in Chapter 2, housebuilding is an industry of slow, evolutionary change, including its production process. Standard building methods and materials minimise how different production can be from one house to the next, and thereby the opportunity for builders to differentiate themselves on the basis of construction methods. This is supported by the interviews. When asked if the construction of single- and semi-detached houses and row houses follows a standardised sequence, nineteen informants replied that 'there's no major difference', 'they're all built from the ground up' and 'coordinating the job is the same'. Builders noted only minor differences, and only one builder stated that construction could be significantly different between these types. As such, innovation in the construction process is unlikely to be a source of competitive difference between builders. This, combined with standardised subcontracting and the deconcentrated structure of the industry, confines competition to a narrow range of managerial options.

Following the recent literature on industrial restructuring and regional economic change, which separates competition on the basis of price, quality/customisation and innovation, we find that builders base their market approach on price in the first instance, particularly cost minimisation. While builders are reluctant to admit that they compete on the basis of price, this competitive strategy is evident in the interviews. In addition to having no internal productive capacity, builders' methods of engaging subcontractors also reflects the desire to minimise costs. With only minor variations, nineteen

informants described their coordination of materials and trades as following a 'just in time' (JIT) approach. As described in Chapter 2, this involves the sourcing of inputs when needed during production, rather warehousing materials, for example. In this case, labour and materials arrive at the work site at the appropriate stage of the construction process. Some might employ JIT production up to the finishing stage and then adopt a 'holding pattern', allowing them to customise a house if it is being built speculatively, for instance. Others prefer to complete their homes even when unsold. In either case, the JIT approach is in keeping with builders' intentions of minimising internal resources, and therefore the potential cost of overcapacity, as well as allowing greater corporate flexibility. As one builder phrased it, "I will put [work] out to tender, but I know the people there, and it's basically price. Price is the moving factor, but I don't need to retain that guy. Why should I keep that guy on my...payroll, if they're not doing anything for me?".

The above quotation reveals yet another indication that builders aim to minimise costs as a means of competing. Not only are cash flow commitments minimised, but the informant acknowledges that preferred trades can be challenged with a tendering process. When asked if they tend to use the same subcontractors, rather than change them frequently, all twenty informants answered that they have ongoing relationships with most of their trades. In a few instances, builders will vary their subcontractors, usually according to availability, reliability, or because some tasks are deemed less important.[59] In most cases, relationships with their trades seldom change; some date back several decades. Here, we might expect that contracting relationships are well established,

requiring little negotiation. But this is not the case. Nine builders indicated that they tender their contracts, even though their work eventually goes to the same trades; they keep their trades 'honest'. One of these companies was most obvious in describing this practice as the 'dirty work' of peddling contracts for the lowest price, in other words, consistently challenging their preferred trade crew. To be sure, thirteen builders indicated that they opt for more expensive trades, which might suggest that construction quality, not just cost, guides their choice. However, their intention could be interpreted to be focussed on the reduction of long-run costs by minimising after-sales service calls, calls that would otherwise be required if contracting work to the lowest bidder—presumably producing the shoddiest work. Moreover, eight of these thirteen companies are those which consistently tender their work, despite it being awarded regularly to the same trade company.

With such a strong emphasis on price, is there any room for competition on the basis of quality? When asked directly whether they compete on the basis of price or quality, and which is more important, seventeen answered quality. This would appear to contradict the argument that builders base their competitive strategy on price and cost minimisation, but a closer examination of their answers reveals that cost always lurks in the background. Apart from these seventeen companies, two builders were direct in answering that their basic approach is to keep costs down. One of these was the company which admits to the 'dirty work' of tendering against preferred trades. A third builder stated that cost can be a factor when the market slows, given that customers themselves discriminate on the basis of price in a buyer's market. But of the seventeen builders that

boast quality as their competitive strategy, an examination of their attitudes toward the cost and quality of trades is revealing, given that all builders in the sample regularly keep to their own trades. Only four stated that they use more expensive trades while not indicating that they tender their contracts to keep costs down. On the other hand, nine builders stated that they tender their construction work, again, despite regularly using the same trades. One builder made no mention of using more expensive trades at all. Therefore, although a majority of builders answered that quality is the basis of their competitive strategies, only a minority of these—and thereby a small minority of the sample—are likely to forego cost minimisation as the basis for competition in the first instance. Given the structure of the industry, where there are enough players to ensure that margins are narrow, and that contracting is the operating method of all builders, their treatment of this input therefore reveals that cost minimisation is the basis of their strategy and survival.

While cost minimisation is important to competition among housebuilders, the interviews reveal that there are other, less central, bases on which firms may be differentiated. These relate to the segmentation of the housing market, by price and geography. When asked for their average house price, excluding the cost of land, informants returned a range of answers which varied by builder size.[60] As shown in Table 6.6a, there was a clear distinction in the market segments of small and large builders. The former built exclusively upscale homes, as did one medium-sized builder, itself tending to be smaller rather than larger. In contrast, large firms build no homes in the highest price category and, like medium size builders, are mixed among intermediate

Table 6.6: Firm Size Class and Competitive Strategy, Interviewed Builders, 2000

Table 6a: Number of Firms per Price Category

Price Range	Size Class: Small	Medium	Large	TOTAL*
<50 000	0	0	0	0
50 000 - 100 000	0	1	1	2
100 000 - 150 000	0	3	4	7
150 000 - 200 000	0	3	5	8
> 200 000	6	1	0	7
TOTAL*	6	8	10	24

Table 6b: Number of Firms by Area of Operation*

	Size Class: Small	Medium	Large	TOTAL*
Own Municipality	5	0	0	5
Toronto Region	3	2	8	13
Throughout Ontario	0	3	1	4
Outside Ontario	0	1	1	2
TOTAL*	8	6	10	24

*Firms are classed in more than one category where multiple responses are given.

Source: Interviews with Toronto builders, 2000

price ranges. While there is no clear pattern to differentiate medium and large builders by price segment, small firms clearly stand apart from the rest in pursuing the market for upscale new homes. Given the small market for higher-priced housing, small builders appear to pursue a strategy of differentiation by catering to the top end of the market.

The same holds true for the geography of the housing market, where small builders are again distinct from the rest. As shown in Table 6.6b, medium and large builders operate throughout the Toronto region, as well as other regions of Ontario and in some cases outside the province. Small builders can also range widely in the urban region, though none ventures beyond this area. In fact, small builders tend to cater to local housing markets, 'their own municipalities', perhaps where their work is recognised, where their local knowledge is a competitive advantage, and certainly where large builders cannot extract the volume of output they require on an ongoing basis. Together, the segmentation of the housing market by price and geography suggests not only an additional explanation for the persistence of the small builder—and thereby industry deconcentration, but also how firms engage secondary market strategies beyond cost minimisation. In general, builders approach the new house market by reducing direct and indirect cost as much as possible, and conjoin this approach with attempts to differentiate themselves in segments of the housing market, a secondary strategy that varies by company size.

But there remains one more defining competitive strategy among interviewed builders, one which perhaps is more important than any other to understanding why the industry should remain so deconcentrated: satisficing behaviour. As discussed in Chapter

2, firm growth and profit maximisation are usually unchallenged assumptions in the literature on industrial organisation. Indeed, the foregoing discussion has made much of the ways in which builders compete with one another, when in fact, at the root of most builders' competitive 'strategy' is a strong uncompetitive approach to housebuilding. Interviewed builders, large and small, are generally unwilling to increase their output, even though they stated that they could. Of the twenty builders interviewed, only three--all large--can be loosely described as 'expansionary'. One cautiously expanded as much as possible when the market permitted but also wanting to be able to downscale when demand flagged. Another was moderately expansionary, preferring 'orderly growth'. The third was aggressively expansionary, now pursuing an explicit strategy of market dominance. As such, these three large builders are a minority within their own size class of eight, and a small minority within the interview sample. The majority of interviewed firms preferred to keep their output constant at current levels, neither expanding nor contracting even though they admit that they and other builders can easily do so. For the majority of interviewed firms, including most large-scale producers, market domination is not a primary directive.

The interviews provided a variety of evidence to indicate that a satisficing strategy may be at play among many builders. When asked if they wanted to become dominant players in their given market segment, seven answered positively. However, two of these are the expansionary companies noted above, while the remainder are chasing niche markets, such as first-time buyers and adult communities. Most of these builders therefore aim only for dominance within a niche segment, not in terms of full

market dominance. This is a significant fact in the light of builders' opinion that construction varies little for different types of single-family homes . More telling, thirteen builders had no intention of dominating in any respect, even if they were operating in specialised market segments or areas.

Builders' responses to questions on marketing--presumably a vehicle for market awareness, competition and expansion--are just as revealing. When asked if they undertake any marketing activity at all, twelve answered negatively. Five others stated that they undertook extremely modest marketing efforts, such as information-gathering through local real-estate agents. Of the three remaining companies, all large, market research is carried out in-house by one and by contracted research firms in the other two cases. In only one case, that of the expansionary firm noted above, can it be said that a fully-developed marketing program was in place, using a market research firm for sophisticated demographic and land market analysis, and complemented by aggressive advertising. These latter builders are exceptions, for the others rely on 'feel' and 'instinct', or simply express no need at all to market their products. The approach among most builders, to marketing and to their market niche, as with their growth intentions, may be satisficing.

Under these conditions, how, then, could housebuilding ever become concentrated in Toronto? While we might have expected to find that a handful of large companies were pursuing the goals of market domination, only one builder was doing so. The other large firms, like their smaller counterparts, opt for consistency, not growth. None appears to be pursuing any significantly different approach to production, instead keeping

to standard subcontracting practices among firms of all sizes. The industry is therefore devoid of the kinds of expansionary firms that brought concentration in other industries. Meanwhile, the industry's competitive nature guards against individual firms' ability to reap 'excess profits'—a condition which itself breeds firm entry, as noted in Chapter 2. Small firms keep this in check, aided by geographical and market segmentation strategies which keep them afloat even if large builders were to turn to more aggressive competitive strategies. Fierce competition, when it exists, surely brings about the failure of the large numbers of firms shown in earlier chapters, but a large segment of housebuilders do not follow such practices. Among this stable group of interviewed firms, satisficing behaviour is more common; indeed, it may explain their longevity.

6.3 Conclusion

Toronto builders were able to draw upon the region's well developed subcontracting infrastructure. In general, they used subcontracting as an attractive operating method in the face of constant market turbulence, a feature of the industry specified in earlier chapters. Large or small, because builders need not internalise construction work, they tend to be structured in much the same way. With only minor exceptions, this means that firms focus on the administration of construction and on their abilities to switch between markets to pursue alternative opportunities. Administration is the focus of builders' competitive and corporate strategies, their core competency. This helps to explain why builders compete on the basis of cost minimisation while remaining satisficers. Cost minimisation keeps their margins as wide as possible for their given

level of output, which they choose not to expand because they are averse to being over invested. In other words, builders try to make the most of what little they choose to pursue in housebuilding. Subcontracting is therefore a definitive feature of the industry, facilitating these firm strategies and, ultimately, firm deconcentration and transience.

While it is always difficult to generalise beyond an interview sample of this size, it can be inferred that interviewed builders are representative of housebuilding in Toronto in terms of firm organisation and operation. The subcontracting infrastructure in Toronto exists not only for interviewed builders, and thereby serves the entire urban region. More importantly, the lack of differences between most interviewed large builders—those most likely to do things differently with greater internal resources—and others suggests that these findings are typical. Given that large interviewed firms number eight of the 43 in the urban region (Table 6.1), the interview sample is probably a good indication of what all big builders in the region are doing. Moreover, it would be difficult to find smaller firms that do not rely on subcontracting. Generalisation beyond the Toronto context is more tenuous, where smaller firms are more abundant, and where local structures of housing provision could be quite different, especially subcontracting practices. If anything, large interviewed builders are representative of Ontario, given their overrepresentation in the sample and in the Toronto CMA. How far their few differences might be taken outside of the Toronto region is unclear.

Notes

[1] Note that I reported 731 Toronto CMA builders in Chapter 3, according to the ONHWP 1998 Buyer's Guide, versus the 894 reported in the ONHWP data for that same year. This discrepancy can be attributed

Notes

to incomplete/inaccurate addresses given in the Guide. Thus, the omitted builders cannot be dated, again because builders in the data are not identified by name.

[2] All figures quoted here refer to firms' numbers of salaried employees devoted strictly to housebuilding. Employees serving functions in different markets, such as land development and non-construction activity, are not included.

[3] L4, interviewed 18 February 2000. As noted in Chapter 3, interviewed builders are referred to according to their size class, and interview order. Small builders are classed as S1 through S7; medium M1 through M5; large L1 through L8. True names cannot be given to protect anonymity.

[4] L7, interviewed 28 February 2000.

[5] L1, interviewed 12 February 2000.

[6] These figures are calculated by using the average house price of $200 000 in the Toronto market during the interview period, and multiplying that by the output for the smallest and largest of these three large builders, 800 and 2000 units per annum, respectively.

[7] L1, interviewed 12 February 2000.

[8] As noted in Table 6.4, the total number of responses for most categories of administrative work do not total to the number of firms. In these cases, companies replied that the category of work did not apply to their operations, such as market research and advertising, thus reinforcing the point that these are organisationally streamlined companies.

[9] S5, Interviewed 17 February 2000.

[10] L5, Interviewed 23 February 2000.

[11] S4, interviewed 3 March 2000.

[12] L7, interviewed 28 February 2000.

[13] S1, interviewed 9 February 2000.

[14] S4, interviewed 3 March 2000.

[15] L7, interviewed 28 February 2000;

[16] L2, interviewed 15 February 2000.

[17] L6, interviewed 28 February 2000.

[18] M4, interviewed 17 February 2000.

[19] L4, interviewed 18 February 2000.

[20] L5, interviewed 23 February 2000.

[21] M3, interviewed 16 February 2000.

[22] M2, interviewed 16 February 2000.

[23] S4, interviewed 3 March 2000.

[24] S5, interviewed 8 March 2000.

[25] S3, interviewed 24 February 2000.

[26] S7, interviewed 15 March 2000.

[27] M2, interviewed 14 February 2000.

[28] S7, interviewed 15 March, 2000.

[29] M3, interviewed 16 February 2000.

[30] L1, interviewed 12 February 2000.

[31] L5, interviewed 23 February 2000.

[32] M4, interviewed 17 February 2000.

[33] S2, interviewed 23 February 2000.

[34] S4, interviewed 3 March 2000.

[35] L3, interviewed 17 February 2000.

[36] S4, interviewed 3 March 2000.

[37] L4, interviewed 18 February 2000.

[38] L3, interviewed 17 February 2000.

[39] M4, interviewed 17 February 2000.

Notes

[40] Recalling the earlier discussion of firm structure, where it was shown that additional salaried employees are unnecessary to raise the level of output among builders, the evidence presented here suggests that additional administrative employees may in fact prove more efficient or necessary when firms integrate. This would explain the division in employee numbers between small and medium and large firms, when output was correct for number of salaried staff. However, this is beyond the analytic scope of the current research.

[41] L7, interviewed 28 February 2000.

[42] L2, interviewed 12 February 2000.

[43] L8, interviewed 20 March 2000.

[44] M4, interviewed 17 February 2000.

[45] S1, interviewed 9 February 2000.

[46] S7, interviewed 15 March 2000.

[47] S5, interviewed 8 March 2000.

[48] S3, interviewed 24 February 2000.

[49] M2, interviewed 16 February 2000.

[50] L4, interviewed 18 February 2000.

[51] L5, interviewed 23 February 2000.

[52] M3, interviewed 16 February 2000.

[53] S1, interviewed 9 February 2000.

[54] S2, interviewed 28 February 2000.

[55] L5, interviewed 23 February 2000.

[56] S3, interviewed 24 February 2000.

[57] M5, interviewed 21 February 2000.

[58] L4, interviewed 18 February 2000.

[59] The importance of a particular task is defined differently among builders. In most cases, this referred to finish work; that which customers can see. In one case, an informant defined important tasks according to how they can impact the structural integrity of a home. While speaking to most builders' desire to minimise costs, in this case according to how many service calls they may have to reply to, it also highlights that builders maintain ongoing relationships with most of their trades.

[60] As a group, informants build homes in all price segments except homes of less than $50 000. This is an unlikely price in the expensive housing market of Toronto, especially in buoyant times.

Chapter 7: Conclusions and Discussion

The housebuilding industry in North America is still composed of many small companies that build on site using labour intensive methods. Observers have called for the 'development' of the industry so that firms would become large, use more capital intensive methods and reap the benefits of economies of scale. Those who have not prescribed this remedy have assumed that competitive pressures would carry the industry in this direction. It has not. At the continental, national and provincial scales, the housebuilding industry has remained deconcentrated throughout the post-WWII period. If Ontario's recent experience is any indication, this pattern is associated with very high rates of turnover, as companies enter and leave the industry in large numbers and on a regular basis. Turnover is greatest among the numerous, small companies but is also common among the largest.

It is on these bases that past observers have criticised the industry. In regards to firm transience, criticisms may be warranted. The industry is composed of a large number of firms which last only a short period, exposing risks to buyers especially due to the long production run of a house. But the presence of small companies is not in itself a problem that needs fixing. The small firm, it was thought, thwarted the uptake of apparently more advanced production methods in use in other industries, and thus perpetuated the handicarft nature of homebuilding. This line of reasoning was based on comparisons with, and preferences for, Fordist methods which have lately been

questioned for their ability to confront increasingly adverse market conditions since the 1970s. Since then, the rise of flexible specialisation, particularly through the examples of advanced industrial districts and lean production, has become the new model preferred in many industries and also by many observers of the economic scene. While recent studies of housebuilding in North America are few, it is easy to see from chapter 6 how builders' organisation and operating methods are very much like these new, preferred, manufacturing models: the typical building company is small and administratively streamlined. It relies heavily on production subcontracting for external economies of scale and scope, and switches between product markets to tap different opportunities.

The explanations for these features of housebuilding ultimately rest on the ease with which firms may enter the industry and in particular the availability of an elaborate subcontracting infrastructure. Indeed, interviewed builders in Toronto stated that firm entry is perhaps 'too easy'. This would explain why the industry remains deconcentrated and why so many companies fail. The costs to entry and exit are minimal. So too are the technological barriers. Firms may easily enter the market and rely on subcontractors for technical know-how. Internal firm resources are confined to administration and operations. The core competency of the housebuilder is not, as might be expected, building. Moreover, builders do not strive to dominate their market. It is easy to see why housebuilding remains deconcentrated. The behaviour of Toronto builders may not be exactly typical for local structures of provision do vary. However, evidence from the trade journals suggests that the Toronto case study is broadly indicative of the general pattern.

If these features have been incorrectly criticised by past observers, how should we reinterpret the housebuilding industry? As argued in chapter 2, the notion of industrial development must consider the conditions of production and consumption within each industry. Firms face different constraints, depending on their products and the nature of demand. The heterogeneity, longevity and spatial fixity of the house mitigates against capital intensive building methods, except in limited segments of the market. Added to these is the instability of demand for new housing, varying according to day-to-day weather, seasons and business cycles more than for most other goods. For these reasons, it is reasonable to expect that housebuilding will never be organised in the same way as other manufacturing activities. Small firms and labour intensive methods have proven to be appropriate for the production of new housing. Recognising the volatility of the market, as Toronto builders do, capacity is added and removed by contracting out rather than internalising work. The aversion to Fordist integrated scale economies is merely a rational response to the risk of exposure.

In this light, the housebuilder is not industrially backward but a flexible and efficient agent. In manufacturing, collaborative firm networks in advanced industrial districts and lean producers share many of these features. The new competition of faster-changing niched markets explains why they must be so. Their reliance on external scale and scope economies and inventory management merely repeats what housebuilding has been doing for decades in the face of the same kinds of market conditions. In Toronto, extensive use of subcontracting is normal. This strategy not only allows builders to add and remove capacity when needed but also permits switching between the market for new

homes and other endeavours as opportunities present themselves. In the construction of houses, the use of production subcontracting is so extensive that builders are essentially project managers.

If this interpretation is accurate, what do we most need to know in order to understand the modern housebuilding industry? The findings summarised above expose as many questions as they present answers. Three key areas of future research may be identified, each extending the main results of this thesis. The first concerns spatial and temporal variation in the size structure of the industry. While national and Ontario patterns are broadly similar, provincial variations do exist. We might expect these to be most prevalent where general economic conditions have not corresponded to the Ontario experience over the study period. Alberta is a good example as its economy ebbed and flowed at different times and to a differebt extent than did Ontario's. Since housebuilding is so cyclical, what impact did these alternative cycles have on the industry's firm size structure? Might Alberta's housebuilding industry have responded differently because concentration is higher there than in Ontario (Wetherell and Kmet, 1991)? Might the fluctuations in size structure change in Ontario have been repeated, or amplified, in Alberta? These remain open questions and point to the need for comparative research.

A related issue concerns the indications that housebuilding might now be entering a period of structural change. Medium-sized builders have become a more stable group while their collective market share has become the largest. It is too soon to know whether this is a medium-term shift or a longer-term trend. Some observers have

suggested that a restructuring is on the horizon (CMHC, 1989; Newman, 1984). Research on whether such a shift might be happening, why and how it might vary regionally, would complement the findings of the thesis.

The second area of future research relates to the transience of housebuilding firms. Given the simple technical and operational requirements of housebuilding, it is not surprising to find so many companies entering the industry. Among these we find the least prepared builders and hence those that fail. But what separates these from the builders that remain active? Interviews with long-time builders in Toronto provide insights into those that succeed but not of those that fail. From the findings presented here, we might hypothesise that the source of failure may be an over-reliance on subcontracting, perhaps in combination with an inability to effectively coordinate the construction process. But this remains speculation.

A third area of research relates to questions of firm organisation and operation. While this thesis has presented evidence on the internal organisation of builders of different sizes, and their related operating methods, it does not explore other aspects of the company organisation and operation. For example, finance and marketing are influenced by, and affect, production organisation. A focussed examination of these areas, such as the terms of purchase and sale, would fill in our understanding of production and of the building firm's accumulation matrix more generally.

In addition to research on questions raised directly from the results in this thesis, future research could extend this thesis in a number of areas. The first relates to the market strategies of builders. One of these considerations which has received a fair

amount of attention in the industrial literature is the relationship among contracting firms. What is the nature of the transaction? As noted in chapter 2, firms seeking external economies expose themselves to a degree of risk. How is this confronted? Do purchasing firms exert power over sellers, or subcontractors? In housebuilding, perhaps sellers yield greater power because small builders have little technical know-how and cannot supervise specialised trade work. If trades do possess the power in these transactions, how does this influence the structure of the industry? We might speculate that housebuilding remains deconcentrated because subcontracting levels the playing field between firms of different sizes, so that there is little advantage in volume production. But is it true? Future research will need to pay closer attention to the relationship between the builder and those subcontractors on whom they almost invariably rely.

Further research is also needed to examine the market flexibility of builders. To which markets do builders switch when housebuilding slows? It seems logical that divestment would occur between related activities, such that builders alternate between new construction and renovation work, for example. As shown in chapter 6, many of the larger firms engage land development as an obvious supply-chain integration strategy. However, diversification may include unrelated activities such as waste management. Does the streamlined structure of the builder reduce the barriers into unrelated activities? Is such behaviour possible because other markets also present firms with extensive subcontracting resources, in effect facilitating firm entry there as well? The nature and extent of market flexibility are open issues for further enquiry.

Finally, an area of almost complete neglect is the geography of housebuilding. The spatial behaviour of building companies across space and through time would add further to our understanding of both urban geography and industrial organisation. As an industry where production is mobile and the final product is stationary, housebuilding presents an opportunity to examine spatial strategies/behaviour as it influences industrial organisation. Is the builder primarily a local enterprise or do they operate in more than one housing market? How might geographical diversification influence the structure of the industry? Do business cycles affect any of these dynamics? Given that production must be mobile, then the influence of space on the organisation of the industry would seem to be the next logical step in the development of this research program.

In these ways, we can begin to fill in our understanding of this neglected industry. This thesis, and the research program it initiates, can therefore fill important gaps in the literatures on housing provision, the production of urban space and industrial organisation.

Appendixes

Appendix 1: Interview Schedule

Appendix 1 presents the interview schedule used in the completion of twenty corporate interviews in the Spring of 2000. The interviews were carried out in order to complement the quantitative data analysis presented in chapters 4 and 5. Specifically, the interviews allowed insights into the internal organisation, operating methods and strategies of a selection of housebuilders operating in Ontario's largest housing market—Toronto. For further details on the use of corporate interviews, see chapter 3. Chapter 6 presents the analysis and results of the interviews.

Appendix 1: Interview Schedule

Interview #____

1. ***Firm Classification/Background.***
2. ***Firm Strategy, Organization and Management.***
3. ***Production Methods.***
4. ***General Industry Perception***

Firm Classification/Background

Date
Name
Age
Position/Title

1. Company name:

2. Address (how long at this address):

3. Age of firm:

4. Type of firm (individual proprietorship, partnership, corporation, joint venture/group of affiliates).

5. Is this a family-run business?
Probe:
If so, how many generations?
Friends?
Start out as family business?
Is this common?

6. What proportion of your firm's business is devoted to new housebuilding?
Probe:
And to related activities (such as land development, multi-family, sub-contracting, renovations)?
To unrelated activities?

7. What is the number of houses your company completes in the average year?
Probe:

As operative/merchant/builder-developer.
As a general contractor building tract houses on developed land.
As custom contract.
In these price ranges (excluding the cost of land):

1	< 50 000	
2	50 000 - 100 000	
3	100 000 - 150 000	
4	150 000 - 200 000	
5	> 200 000	

8. Where does your company do most of its housebuilding?
Probe:

Own municipality.
Throughout the Toronto region.
Other urban regions in Ontario.
Outside Ontario. Where?
Has this changed over time?

Firm Strategy, Organization and Management

Strategy

1. You mentioned that you do (not) get involved in other activities (related/unrelated). Why is it important for your company to be specialised/diversified?
Probe:

Prefer specialisation/diversification/integration?
Why? To be more competitive in housebuilding? To be flexible?
Advantages/Disadvantages?

2. Do you try to appeal to customers more by price, or by quality?
Probe:

Which is more important? (use an analogy to explain).

3. Is it your company's goal to:

Expand as much as possible? Why?
Try to maintain a more or less constant quantity of production, even if this is below the maximum possible?
Why?

4. Does your company expand and contract its volume of business?
Probe:
Intentionally?
Unintentionally?
Why?
How? Hiring? Sub-contracting? Anything else?
Expand and contract with market change?

5. Are there limits to how big a housebuilder can be?
Probe:
If so, what do you see as the limits?
Why? Inputs/Risk/Cyclicality/Other?

6. Does your company seek to specialise in certain segments of the market?
Probe:
Price ranges.
Types of houses.
Specific areas where you build.

7. Are you trying to become a major player in this segment?
Probe:
Control of price ranges.
Control of types of houses.
Control of specific areas where you build.

8. Over the course of a year, do you organise your building activity so that you have steady work?
Probe:
If so, why?
How? In-house versus sub-contracted work?
To avoid seasonal changes in work?

9. Do you alter your market strategy in good/bad times?
Probe:
Expanding/contracting output.
Entering/exiting the industry.
Different market segments/geographies.

10. Has your company ever significantly altered its strategy and housebuilding operations in the past? How?
Probe:
In terms of the questions above.
Why?
How? Building, marketing, subcontracting?

Organization and Management

11. What sorts of records does your company keep?
Probe:
Estimating procedures.
Materials purchasing.
Inventory controls.
Construction sites/houses built.
Operations, including schedules.
Performance controls.
Costs/revenues/profits.
Contracts.
Other?

12. How many employees does your company currently have?
Probe:
Does this change frequently?
Has this changed significantly in the past? If so, in what ways?
Why?

13. How is your company organised?
Probe:
Employees/departments/functions.
Has this organization changed significantly in the history of the company?
How so?
Why?
Do you have organisational charts?

14. Does your company work co-operatively with other builders and agents in the industry to produce houses, or do you prefer to keep all of your operations 'in house'?
Probe:
With sub-contractors.
Other builders.
Other sorts of companies.
Which types?
Why?

15. In terms of your overall operations, approximately what percentages of the following work categories do you keep 'in house' and what do you sub-contract?

	In House	Sub-Contract
Administrative (overall)		
Executive/Management		
Architectural		
Accounting		
Market Research		
Operations		
Site supervision		
Advertising		
Sales		
Legal		
Construction(overall)		
Foundations		
Framing (including doors and windows)		
Roofing		
Plumbing		
Electrical		
Drywall		
Flooring		
Finish Carpentry		
Other finish work		

16. Why do you choose to maintain your own employees for _____(activities indicated above), and sub-contract _____.

Probe:

Can't sub-contract some things.
Unreliable to sub-contract some things.
Prefer to keep some activities in-house for control.
Unions.
Supplies.
Credit.
Supervision.
Comparative costs.
Other.

17. Do you tend to use the same sub-contractors, or change them frequently? Why?
Probe:
Some change, others consistently used? For specific functions? Markets (ethnicity)?
Availability.
Competitiveness. Price negotiations (method).
Reliability.
Satisfied customers.
Ever use a subcontractor that is not the cheapest? Why?

18. Where do you find your workers?
Probe:
Family, friends, unions, other?
Does this differ for administrative versus construction workers?
Have trouble keeping them?

19. Do you maintain any of your own heavy equipment, or is this sub-contracted?
Probe:
If so, what do you have and why?
Equipment companies.
By sub-contractors.

20. Do you have the capacity to produce and/or handle your own building materials, such as lumber or masonry, or do you have it delivered?
Probe:
Own plant/site-made materials.
Own warehouse.
By lumber/building products dealers.
Through sub-contractors.

21. Do you use prefabricated components? Why?
Probe:
Standard ones like pre-hung doors.
Prefabricated wall sections, floor sections, roof trusses.
What percentage of your typical house is prefabricated?

22. How do you obtain your land?
Probe:
Develop/service it yourself?
From developers?
From other private companies?
From municipalities?
Other.

23. When you do not develop/service land yourself, does this:
    Result in co-operative arrangements with your land source?
    Result in your loss of control over design, construction scheduling, price, anything else?
    Raise the final price of your homes?
    Affect your marketing?
    Affect your operations in any other way?

Probe:

Are there any sources, such as developers, for which any of these is more likely to occur?

Financing

24. How important is external financing to your company?

25. When your company started out, what were its sources of financing?

Probe:

Own account.
Customers account, if custom work.
Bank or other institution.
If combination, % of each.
Other.

26. What is your main source of financing today?

Probe:

Varies?
Percentage of each?
Bank line of credit? If so, how flexible is this?

(IF EXTERNAL FINANCING)

27. When you obtain external financing, does this add any constraints to your operations?

Probe:

Scheduling.
Pricing.
Location.
Sales.
Have you ever been refused financing for particular areas, projects? Why?

Marketing

28. Does your company do market research? How, and what do you look for?

29. Is advertising important to your company?
Probe:
Why?
Specific market segments?
How much do you spend on advertising?

30. What kind of advertising do you use?
Probe:
Referral
Sales agent
Ads in the media

31. Do you use model homes?
Probe:
If yes, do you decorate/furnish it?
Cooperative agreements to decorate/furnish it with other companies?

Production Methods

1. In terms of organising your staff and sub-contractors, would you say there are major differences in building single-detached, semi-detached and townhouse homes?
Probe:
For example, in scheduling the stages of construction?
Is there a typical/standard way to build a house?

2. Focusing on building houses, how does your company co-ordinate its operations?
Probe:
Do you use a schedule to sequence production?
If so, what type of schedule do you use?
Do you have records of these?

3. Would you say that:
a) Your company maintains a tight fit of activities, like sub-contractors and materials delivery, so they occur immediately after each other, 'just-in-time', so to speak?
b) Your company co-ordinates production so that there is constant activity throughout any one project, to avoid idle time, and maybe at the expense of 'just-in-time' speed?
Some combination of both?
Probe:
Why?
Because of employees/equipment.

Because of sub-contractors.
Anything else?

4. How do you organise your work sites?
Probe:
Keeping materials/equipment there?
Set up a (mobile) work area on site?
Supply only supervision, such as foremen?
Let your subcontractors complete their tasks without regular supervision?

5. Is there a maximum distance for your construction operations, beyond which you could not build houses?
Probe:
Constraints?
Inputs, such as labour, materials, land, financing.
Market awareness.
Other.

4. General Industry Perception

1. Is it easy to become a housebuilder/enter the industry?
Probe:
Why/not? What prevents it/makes it easy?
Compared with other industries.

2. Is it easy to leave the industry?
Probe:
Quit the industry?
Costs to exit?

3. How does the housebuilding industry compare with other industries?
Probe:
More or less innovative.
More or less efficient.
More or less risky. Why? Cyclical?
More or less flexible, in relation to changes in technology or demand.
More or less organised, as a lobby group?.
Marketing.

4. Would you say that housebuilding is more like manufacturing, or more a service?
Probe:
From the perspective of what your company provides to customers?

5. What are the constraints/opportunities presented to you as a housebuilder, versus other industries, say clothing and cars (in terms of the features in above question)?

6. In what ways do the different levels of government help or hinder the housebuilding industry?

Probe:

Federal.
Provincial.
Municipal.
Any changes in the relative influence of these over the years?
Compared with other industries.
In your operations, such as obtaining permits, inspections.

Further comments:

Re: Industry Study Interview

Company Name/Contact Person_____

Interview question from Michael Buzzelli, McMaster University Student. When completed, please fax this to (905) 522-3141. Thank you.

Question:

In terms of your overall operations, what percentages of the following work categories do you keep 'in house' what do you sub-contract?

	In House	Sub-Contract
Administrative (overall)		
Executive/Management		
Architectural		
Accounting		
Market Research		
Operations		
Site supervision		
Advertising		
Sales		
Legal		
Construction(overall)		
Foundations		
Framing (including doors and windows)		
Roofing		
Plumbing		
Electrical		
Drywall		
Flooring		
Finish Carpentry		
Other finish work		

Comments:

Again, thank you for your cooperation. If you have any more comments, or would like to know more about this study, please feel free to contact me or my supervisor.

Regards,
Michael Buzzelli

Appendix 2a: Distribution of Builders by Size Class, Ontario 1978-1998

		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
	Size Class											
Small	1	30.9	33.0	35.8	33.5	41.8	30.6	33.6	29.8	32.2	31.9	34.2
	2 to 10	51.0	50.0	48.2	49.0	45.7	45.6	46.0	46.9	45.6	45.7	46.0
	11 to 25	10.1	9.9	8.3	9.1	7.3	11.6	11.2	12.2	11.9	10.3	9.5
Medium	26 to 50	4.1	3.9	4.4	4.1	2.7	5.3	3.7	5.4	4.6	5.5	4.8
	51 to 100	2.4	1.9	1.6	2.1	1.3	4.0	3.1	3.5	2.9	3.4	3.0
	101 to 200	0.9	0.8	0.9	1.5	0.8	2.0	1.8	1.7	1.8	2.3	1.8
Large	>200	0.6	0.6	0.7	0.7	0.4	0.9	0.6	0.6	0.9	0.9	0.6
	Total	100	100	100	100	100	100	100	100	100	100	100
	Total No. of Firms	3105	3449	2434	3126	2507	1895	2067	2411	3107	3593	4247

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Mean
Small	1	36.4	39.8	41.2	36.2	37.0	32.5	35.9	33.6	28.3	27.5	34.1
	2 to 10	45.4	45.3	44.3	46.7	46.4	48.1	46.7	44.9	45.4	45.4	46.6
	11 to 25	9.3	8.1	7.8	8.8	8.6	9.9	9.7	10.3	12.2	13.2	10.0
Medium	26 to 50	4.4	3.6	3.3	4.4	4.5	5.3	4.6	6.7	7.1	7.3	4.7
	51 to 100	2.8	1.8	2.0	2.5	2.2	2.7	2.1	3.3	4.8	4.6	2.8
	101 to 200	1.2	0.9	1.1	1.2	0.9	1.2	0.7	0.8	1.6	1.4	1.3
Large	>200	0.6	0.5	0.2	0.2	0.3	0.2	0.2	0.4	0.6	0.6	0.5
	Total	100	100	100	100	100	100	100	100	100	100	100
	Total No. of Firms	4486	4190	2885	3027	3071	3132	2905	2827	2938	2872	3060.67

Appendix 2b: Distribution of Market Share by Size Class, Ontario 1978-1998

		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
	Size Class											
Small	1	2.8	3.3	3.4	3.0	5.4	2.0	2.7	2.3	2.4	2.2	2.8
	2 to 10	19.6	20.8	18.2	17.6	23.9	12.3	16.0	15.2	12.9	12.9	15.7
	11 to 25	14.9	16.1	12.9	12.9	15.3	12.2	15.1	15.1	14.4	11.2	12.7
Medium	26 to 50	13.3	13.6	15.2	13.1	12.8	12.2	11.0	13.9	11.8	13.0	13.7
	51 to 100	15.5	13.0	10.8	13.4	12.4	18.6	18.3	19.4	15.6	16.4	17.5
	101 to 200	11.7	10.9	13.8	18.8	15.0	18.6	20.5	17.7	18.1	21.5	20.4
Large	>200	22.2	22.4	25.8	21.3	15.2	24.1	16.4	16.4	24.9	22.8	17.2
	Total	100	100	100	100	100	100	100	100	100	100	100
	Total No. of Units	33959	34239	25460	35275	19371	29507	25265	31685	42596	53254	51808

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Mean
	Size Class											
Small	1	3.4	4.5	5.1	3.9	4.2	3.2	4.3	3.1	2.0	2.0	3.2
	2 to 10	17.0	20.3	20.9	21.0	21.8	19.8	23.0	17.4	14.0	14.1	17.8
	11 to 25	13.8	14.9	16.1	15.4	16.3	16.0	18.7	15.6	14.1	15.4	14.7
Medium	26 to 50	14.5	15.0	14.2	17.7	18.2	18.9	20.1	22.2	17.8	19.2	15.3
	51 to 100	18.5	14.3	17.3	19.4	18.2	18.6	17.4	21.7	23.9	23.4	17.3
	101 to 200	16.3	14.3	18.9	16.1	13.5	16.3	10.9	10.9	16.2	14.1	15.9
Large	>200	16.6	16.7	7.4	6.6	7.9	7.1	5.8	9.0	12.1	11.9	15.7
	Total	100	100	100	100	100	100	100	100	100	100	100
	Total No. of Units	48443	37055	23181	28068	27225	31424	24232	30523	41511	39556	33982.7

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