Measuring the Effects of Municipal Regulations on House Prices and Rents

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NOTE: **DISPONIBLE AUSSI EN FRANÇAIS SOUS LE TITRE:**

MESURER LES EFFETS DES RÈGLEMENTS MUNICIPAUX SUR LE PRIX DES MAISONS ET LES LOYERS

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Executive Summary

Housing affordability in Canadian cities declined substantially in the 1980's. Affordability problems are particularly acute for poorer renters. By 1991 in many major Canadian cities, rental payments by a typical poor renter family absorbed more than 45 percent of their income, twice the share for the typical renter. Homeownership also became less affordable as large increases in house prices in Ontario and British Columbia in the second half of the decade pushed homeownership well beyond the reach of younger families. Broad social and economic trends contributed substantially to these changes. The entry of baby-boomers into their prime years for forming households and purchasing homes increased demand for units; at the same time downsizing in manufacturing reeked havoc on the incomes of many poorer Canadians. Both conditions exacerbated affordability problems. Though, these may have been two of the primary forces behind the worsening in affordability, other factors, such as municipal regulations, have played an important role too.

Municipal regulations reduce affordability by causing prices and rents to rise or by changing the composition of units available for purchase or rent. For instance, explicit limits on residential growth increase house prices and rents by limiting supply without also dampening demand. Municipal regulations also encourage the construction and development of larger and more costly units at the expense of more affordable higher density units. Zoning is often used to prohibit higher densities, while policies such as building codes raise the cost of developing or rehabilitating affordable units relative to that of more upscale units. All of these worsen the affordability problems of poorer renters and make the transition from renting to owning less likely.

As long as development continues, controversy and passions will continue to flare over municipal regulations. In the hyperbole of the debate over regulations and their impact on housing affordability, it is easy to forget that these regulations are invariably motivated by legitimate concerns of local residents. Local officials face the difficult task of balancing the needs of these residents with those of land owners and others. In the face of these conditions, the concerns of all parties to the debate are best served by reforms in regulations which address the concerns of existing residents while limiting their negative side-effects, instead of

by a complete rejection of government intervention.

In any effort to reform municipal regulations, local officials would be greatly aided by having access to a set of easily understood measures with which they could compare different regulatory policies. Without tools to gauge the breadth and intensity of existing regulations, successful reforms of local government regulations are impossible. Measurement instruments, generated by a detailed survey of municipal regulations in Canada as proposed here would permit comparisons of policies and their effects across municipalities.

The diversity of regulations, the regulatory environment, and the jurisdictions imposing them make the development of accurate measures of this environment a formidable challenge. The development of accurate and useful instruments to measure the regulatory environment in Canadian cities and towns depends on the existence of a set of consistent data which describe both the types of regulations present and the extent to which they are enforced. To obtain the underlying data, it is necessary to survey the local officials responsible for these policies. Properly designed, it would provide qualitative descriptions of regulatory conditions and the raw information from which objective, quantitative measures can be constructed.

The success or failure of this effort to develop objective, consistent, and comparable measures of municipal regulations depends on the cooperation of local government officials. Only with their input will it be feasible to gather the information that will constitute the data for the measures of local regulatory environments. The variables developed from these data will in turn help these same officials to evaluate their current and future regulations of local residential development. Ultimately, if we want to strike a fair balance between the concerns of existing residents and the need to insure access to affordable housing, we have to be able to measure regulation.

1. Introductory Comments

In the 1980's there was a noticeable decline in affordable rental housing and the transition to homeownership grew increasingly difficult for renters. Declines in real renter incomes and increases in rents and house prices have caused many families to spend a greater proportion of their incomes on shelter and made homeownership an increasingly distant dream. Interest rate declines might have lowered mortgage payments, but large house price increases in British Columbia and Ontario overwhelmed any relief that lower rates brought. Unfortunately, concern over this problem has turned affordability into something of a political football: critics of municipal regulations blame these policies for the affordability crisis, while defenders seek to show that these regulations are the single barrier protecting neighbourhoods and communities from the ravages of development. This paper does not investigate the demographic factors behind these changes. Instead, this work examines how municipal regulations contribute to the affordability problem. It also suggests a strategy for encouraging reform of these regulations. The key is an understanding of the types and intensity of municipal interventions into housing markets in Canada.

The purpose of this paper is to make an argument for developing a set of measures of the regulatory environment in Canadian municipalities within the context of the problem of housing affordability. Successful reforms of local government regulations or even the development of suitable tools for intervention into local housing markets demands instruments that can gauge the breadth and intensity of existing regulations. The steps proposed here would mark the beginning of movement towards a more sensible approach to local government regulation of residential development.

The goal of any reforms should not be the elimination of municipal regulations. As Fischel (1985, 1990) has observed: regulations do not randomly fall from heaven, but are created in response to the legitimate concerns of local residents. Any conclusions about the desirability of these regulations must be made within the context of understanding the goals and intentions behind the policies. The ultimate objective should be to develop mechanisms to meet these concerns while minimizing the negative effects regulations can have on issues such as affordability problems. As the Kean Commission (1991) on regulations and affordability observed, the problem with municipal building and development regulations is

their form not their function. But steps to achieve this end must be predicated on the existence of some yardstick of the types, effectiveness, and costs of municipal government involvement in local housing markets. The measurement instruments, generated by a detailed survey of municipal regulations in Canada proposed here would be just such a yardstick.

Regulations span a wide range of policies including growth controls, zoning, agricultural preservation, development fees, building and design codes, and rent control. By restricting supply or by encouraging the construction of larger and more expensive units these all worsen affordability. However, without a measure of the regulatory environment in Canadian municipalities that is both consistent and thorough, it will be impossible to develop reforms which mitigate the negative impacts of regulations while still addressing the concerns of supporters.

Municipal regulations work in a variety of ways to discourage the supply of affordable housing. By restricting development, discouraging the construction of affordable homes, and making it more difficult to either build or renovate and rehabilitate multi-family units for low income renters, municipal regulations exacerbate affordability problems. In particular, these policies and interventions tend to either explicitly restrict higher density affordable housing, or they create conditions that encourage the market to develop more expensive types of residences than would otherwise be the case. Both restrict the supply of affordable units. However, any final analysis of the role of regulations in the decline in affordability must wait for better evidence on regulations themselves.

2. Developing Measures of Municipal Regulations

A. The Benefits of Measuring the Regulatory Environment

The development of a set of measures of the types and intensity of municipal regulations present in Canadian communities would improve the ability of local officials to determine the net worth of these regulations. One of the biggest problems with the regulation debate is that it is conducted with anecdotes rather than evidence. To obviate this condition and allow for a more informed discussion, a uniform set of measures of the regulatory environment is necessary. These would permit comparisons of policies and their effects across municipalities. It would also lay the foundation for the creation of an index measure

that would indicate changes in the regulatory environment over time for a given locale.

Answers to questions such as: What regulations are used? How effective are they in achieving the objectives of their supporters? What are the impacts of different types of regulations? Are there regulations which can achieve identified goals without harming affordability? Depend on having a set of instruments with which to measure the regulatory environment. These would also benefit activists, builders, community members, and developers. Though these parties can have radically different agendas, their ability to make meaningful contributions to the regulation debate is contingent on a certain level of knowledge. Ultimately it is in the interest of all participants in these debates to expand the universe of publicly accessible information on local government regulations which affect rental and owner-occupied housing. Only thus will it be possible to design regulations which meet the concerns of residents while minimizing their negative impact on issues such as affordability.

The development of accurate and useful instruments that measure the regulatory environment in Canadian cities and towns is critically dependent on a survey of the local officials responsible for planning decisions. The regulatory environment is not a number that is collected by Statistics Canada but a product of interwoven regulations, enforcement strategies, and review processes. This complex web is best revealed through a comprehensive survey. Properly designed, it would provide qualitative descriptions of regulatory conditions and the raw information from which objective quantitative measures can be constructed. These might consist of a set of ten different variables describing aspects of the regulatory environment, each focusing on a different issue, such as the ease with which zoning densities can be changed or the extent to which the development of agricultural land is limited. The development of these consistent quantitative measures would provide local officials with the tools for evaluating regulatory policies.

B. Challenges in Measuring the Regulatory Environment

The diversity of regulations, the regulatory environment, and the jurisdictions imposing them make the development of accurate measures of this environment a formidable challenge. Municipal regulations can take on a wide variety of forms: including explicit development restrictions, development cost charges, land set-asides, restrictive zoning, building codes,

habitat preservation, and agricultural land preservation. As such, observing the existence of one type of policy only reveals a small aspect of the policy tools available to a single municipality. Even more problematic is that the existence of regulations in and of themselves tells us very little, because what is ultimately of importance is how they are enforced. Two towns may have very similar zoning codes. However, if in one, requests for abatements are handled quickly, while in the other any appeal to the zoning board involves a long, costly, and uncertain process, then the two regulatory environments are quite different. The information needed to measure these conditions can only be gathered through a well-designed survey. The variance in regulations, enforcement, and community size and types makes a one size fits all methodology inappropriate for this investigation. Any survey must accommodate these differences as well as the varying role of provincial governments.

Fischel (1985) makes the astute observation that the same set of regulations will have very different effects on development patterns depending on community type. Regulations in urban, suburban, and rural locales will have very different forms and applications because the concerns and values of local residents can vary considerably across these types of communities. Also, the relative strength of narrow interest groups, such as developers or local activists, will depend on the size and makeup of a local community. Taken together these differences exacerbate the difficulties inherent in developing instruments to describe the local regulatory environment.

C. Measuring Municipal Regulations: Critical Factors for Success

To achieve the goal of reforming municipal regulations local officials need the tools to measure and compare regulatory environments. A contention of this presentation is that these instruments can only be developed using the information collected by using a well-designed survey. Four factors are essential for the success of this effort to develop a set of quantitative measures of regulation: survey design and measurement variable construction, geographic coverage, response, and follow-up. A breakdown in any one of these steps can jeopardize the success of the effort.

The importance of survey design cannot be over emphasized. To generate a complete and consistent set of responses, the questionnaire must be easily and consistently understood by all respondents. Their answers must not only fully describe the regulatory environment,

but do so in a way that allows for quantitative measures to be developed from them. Successful survey design is predicated on painstaking preliminary interviews with local government officials, builders and developers, and community groups to insure that the questions on the survey address the essential elements of the regulatory environment. The initial questionnaire must also be field tested. Discussions with test participants will reveal problem areas in the survey design which can be corrected prior to the dissemination of the survey.

Without widespread coverage and a high response rate, a survey and the measures developed from it are of limited use. Coverage must be complete, with the local planning officials in every jurisdiction in Canada's twenty five metropolitan areas receiving the survey. To insure an adequate level of response, officials who do not complete the survey should be contacted individually. Furthermore, once the responses have been received, follow-up interviews with a sub-sample of the respondents will help to insure that the questionnaire was correctly understood. The relative concentration of Canada's population into a small number of metropolitan areas eases this process because the number of surveyed jurisdictions, though large, is not unwieldy. Finally, it is important to conduct follow-up interviews with local builders and community activists to insure consistency between the responses of government officials and the perceptions of other concerned parties.

D. Using the Results: An Aid to Local Government Officials

As long as development continues, controversy and passions over municipal regulations will continue to flare. The debate over regulations and their impact on housing affordability is frequently conducted in hyperbole. What can be forgotten is that regulations are invariably motivated by legitimate concerns of local residents. Officials must balance the needs of different groups of residents and land owners. To prevent local building and development policy and administration from being driven by casual anecdotes, they should have access to a set of easily understood measures that will allow them to compare different regulatory policies and the impacts of these policies in different Canadian municipalities. The survey described here is intended to generate a database that would provide local officials and others with this information.

The ultimate goal of this work is to develop a single index of regulation. This index

would allow a simple comparison of the intensity of the set of regulatory instruments among jurisdictions. Furthermore, it would provide an objective means for local officials to chart their own progress over time in reforming existing regulations or introducing new ones. Development of such an index must wait until sufficient data has been generated. Then it will be possible to conduct the appropriate statistical tests to determine the proper weighting of the various measures created from the survey data into a single index. Ultimately the success or failure of this effort will depend on the cooperation of local government officials. Only with their input will it be feasible to gather the information that will constitute the data for the objective measures of local regulatory environments. These measures will in turn help these same officials to evaluate their current and future regulations of local residential development. If we want to strike a fair balance between the concerns of existing residents and the need to insure access to affordable housing, we have to be able to measure regulation.

3. The Effects of Municipal Regulation on Affordability

Municipal regulations can damage affordability through policies which raise prices and rents or by creating conditions which lead to the construction of larger units than would otherwise be built. The tools available to local and provincial governments for regulating the supply of housing are quite diverse: they include growth controls on new development and construction, zoning restrictions on residential densities, the imposition of development cost charges (DCCs) or fees for permission to build, building and design codes for both individual units and subdivision infrastructure, rent and vacancy controls, and measures designed to preserve and protect the environment and natural habitats. Even if these measures do not directly cause price or rent increases, by altering the mix of units available to the market or the timing of new development, they can raise the overall level of prices and rents through changes in the structure of supply.

All municipal regulations provide a benefit to at least some members of the community. They can even make a location more attractive to prospective residents. Criticism of regulations on affordability grounds does not represent a rejection of these tools, but signals the social cost associated with their use. Ultimately housing markets are best served by efforts to develop policies which address the concerns of existing residents while

limiting the effect of these actions on poorer households, instead of by a complete rejection of government intervention. This perspective is very much in the spirit of Down's (1991) comment that the problem with many regulations is not their function but their form.

A. Regulations With Direct Effects on Supply: Growth Controls, Development Restrictions, and Zoning

Explicit limits on new development and the zoning of land use are the most prominent forms of local government intervention into housing markets. Growth controls generally regulate the pace of residential development by placing restrictions on the numbers of subdivisions or building permits issued. Development restrictions may limit development in certain areas to protect certain natural habitats, for community preservation, or to maintain agricultural activity. In contrast, rather than affecting all development, restrictive zoning tends to only constrain specific land uses and levels of residential density. In both cases, if the permitted amount of development is insufficient to meet demand, then the constraints imposed by these regulations will act to increase prices and rents. Ontario's Bill 163, introduced by the Rae government, is an example of this type of control. While the measure does not impose explicit limits on the number of units started, by excluding areas from development it acts to raise demand and thus land prices in those areas open to development. New residents must pay higher prices and both new and old residents pay higher rents than they would otherwise.

There have been countless studies of the effects of growth controls on housing prices. Fischel's (1990) survey of the empirical literature demonstrates that the preponderance of these studies find that growth controls are correlated with higher house prices. The earliest studies of North American growth controls by Schwartz, Hansen, and Green (1981) found that prices in Petaluma, California exceeded those in a control city by 8 percent. Of greater concern here, in a study of Davis, California they discovered that when faced with limits on the number of units that could be built, developers chose to build higher priced homes instead of more affordable units (Schwartz, Hansen, and Green, 1984). Other works using data from multiple cities within a metropolitan area, such as Katz and Rosen (1987), also find that growth controls in a given community are associated with higher prices.

Causality is frequently a problem in studies of house prices and growth controls. Are

prices higher because people want to live in a community with growth controls - increased demand - or because the controls restrict supply? In both cases prices and rents rise, making shelter less affordable. However, in the former case higher prices reflect an added benefit. Though affordability has worsened, if households are willing to pay the price for the benefit, then their welfare is not reduced. Brueckner (1990) demonstrates that under certain criteria, growth controls will raise the value of undeveloped land. However, in their existing form Pollakowski and Wachter (1990) and Cho and Linneman (1993) find that these controls unambiguously worsen affordability. They show that prices rise in communities adjacent to those imposing growth controls. These neighboring communities receive none of the benefits of control, so the rise in prices and rents reflects a cost. The higher prices mean that owners of developed property benefit and the costs are paid by owners of undeveloped land, prospective residents and current renters.

There has been a long debate as to whether zoning really matters. The theoretical treatment of the subject is reviewed by Pogodzinski and Sass (1990) who show that the effects of zoning are quite sensitive to the framework of the theoretical model.[1] Early work on residential zoning in Vancouver by Mark and Goldberg (1986) argues that zoning has little observable effect on house values. Their conclusions are supported by McMillen and McDonald (1990) who find that over the long-run zoning is not a binding constraint because it adjusts to reflect market conditions. But in the short-run zoning can clearly reduce the value of undeveloped land. Studies such as Vaillancourt and Monty's (1985) work on agricultural land outside of Montreal, show that when zoning restrictions limit a parcel's development potential it results in lower prices for undeveloped land. As Fischel (1990) observes, a problem with this work is that zoning is not exogenous. It is a function of a political process, and the social and economic issues are inter-related.

Empirical studies of the effects of restrictive government actions on house prices and

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Theoretical results are sensitive to the number of jurisdictions, classes of consumers, nature of the supply function, and assumptions regarding externalities. These models tend to concern themselves with aggregate welfare and do not address the question of whether poorer residents are made worse off by the zoning policies. The standard assumptions is that if aggregate welfare increases, financial grants can be given to the poor that unambiguously improve their condition.

rents have problems with causality. Prices will always be higher in faster growing areas, which are precisely the areas where controls are most likely to be imposed. The most recent attempt to look at this issue across metropolitan areas is Malpezzi's work (1994). The strong point of his research is that he creates a modeling structure that integrates the effects of regulations on both prices, rents, and urban structure. However, Malpezzi constructs an ad hoc index to measure regulation which includes both irrelevant variables and categorical measures whose values serve to cancel each other out. He is further hampered by data from the Wharton Urban Decentralization Project survey of regulation which do not address key aspects of the regulatory environment and appear to be inaccurate. As a result, he is unable to develop a consistent and significant relationship between local growth controls and either house prices or rents, though he does find that a state's regulatory environment is correlated with higher metropolitan area rents and prices. Malpezzi's work notwithstanding, the overall evidence from studies of individual communities and metropolitan areas is that growth controls cause higher prices and rents by restricting supply.

Zoning commonly reduces affordability because localities invariably zone to exclude the higher density units best suited for renters and first-time buyers. With each jurisdiction acting in its own perceived interest to exclude these units, the aggregate effect is a reduction in their supply and an increase in the supply of larger single family homes. The relative prices and rents of these larger units fall, while those of units appropriate for poorer households rise. Filtering will mitigate some of the impact on poorer households. The increase in the supply of larger homes causes the price of these units to fall, attracting some middle market consumers away from units in their market segment. The relative imbalance in the middle market attracts poorer consumers to this segment depressing prices at the bottom end of the market. However, downward filtering is a second order effect and will not wholly offset the reduction in supply resulting from binding zoning.

B. The Price of Development: Development Cost Charges, Impact Fees, and Delays in the Approvals Process

Builders commonly complain that costs imposed by local governments for the right to develop directly increase the price of housing. Examples of these costs include out of pocket fees, the requirement to set land aside for public use, and the monetary cost associated with

delays in development while awaiting approvals.[2] There is no doubt that DCCs levied for the provision of public infrastructure such as roads, sewers and schools can be quite significant. In the Vancouver area the total amount of DCCs for a detached unit can easily exceed $7,000. Land set aside for schools and parks can also amount to a considerable cost per unit.[3] The development community's argument that these costs are passed through to consumers rests on a theoretically weak contention that the supply of land is very elastic and that demand for housing is quite inelastic, the exact reverse of actual conditions. Though fees are unlikely to have the long run impact that developers contend, they can cause affordability problems by slowing the rate at which new land is developed and encouraging the construction of larger and more expensive units.

A basic principle of urban economic theory is that site-specific benefits and costs are capitalized into the price of land. Higher construction and development costs lead not to increases in the price of housing, but to decreases in the price developers are willing to pay for land. This theoretical argument is supported by casual empiricism drawn from private interviews (McDonald, et al., 1988).[4] In one of the few econometric studies of impact fees on a single community, Delaney and Smith (1989) argue that while fees lead initially to higher house prices, over time any price differences with neighboring communities are obviated. Their results are more consistent with the process by which a market reaches a new equilibrium where fees do not change housing prices than they are with the argument put forth by developers that fees lead directly to higher prices. Furthermore, as Cooley and

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For the development communities's views on DCCs and development delays see "Bottlenecks on Affordable Housing," Urban Development Institute, Vancouver, November 1993.

The Urban Development Institute estimates that the per unit cost of a British Columbia government proposal to require that approximately 10 to 12 acres of land be set aside for schools will be approximately $8,000. This reflects the cost of land which must be purchased but cannot be developed ("Housing Costs Targeted," *The Province*, June 20, 1995, p.A37)

Several other factors support the rejection of the simple "it will increase house prices" argument. First, if they can just raise house prices, why haven't builders increased their profits by doing so already? Second, land bids are usually calculated by subtracting profits, development costs, and financing costs from expected housing prices, so higher fees will lead directly to lower land bids. Uncertainty regarding precise values for houses allows for some increases in prices in response to higher fees to work in the short-run. Over time, though, equilibrium should return.

LaCivita (1982), Downing and McCaleb (1987), and Navarro and Carson (1991) note, higher prices and rents associated with fees need not reflect a burden, but rather a benefit. For instance, decreases in congestion because of public infrastructure financed by fees might make a community more attractive, leading to higher prices and rents because of increased demand. From the perspective of the poor renter or prospective first time buyer, the presence of additional benefits does not eliminate affordability problems if the household would not freely have chosen that combination of benefits and prices.

Over time, the higher development costs that result from fees exacerbate affordability problems by slowing the rate of development and thus reducing supply. If landowners must sell in response to lower land bids from builders and developers, then fees only lower land prices. However, since landowners can choose not to sell, or if they do sell then to developers of other types of land uses or densities with lower relative DCCs, a long run effect of the increases in fees is to slow the pace of residential development. Over time this reduction in the flow of new construction leads to a smaller housing stock (supply) and higher prices and rents than would otherwise be the case.

As they are typically imposed, DCCs and impact fees discourage the construction of more modest housing. These levies are per residential unit, not per dollar of structure value. Thus the cost of the fees is the same for a moderate starter home and a more luxurious unit. The net effect of these fixed level charges is to increase the relative cost of constructing more moderate units. The effect on supply operates via the land market. Larger increases in the cost of constructing denser developments lower the bids for these land uses relative to other types of residential developments. Fewer high density developments occur because land owners accept more of the bids from low density developers than they would have otherwise. As a result, there is a shift in supply from moderate to more expensive units.

The effect of a change in the mix of construction has lasting effects since the characteristics of the future housing stock are determined by the type of units constructed today. Generally, new units are not part of the supply of lower end residential units. Instead poorer renters and owners choose from older units, that over time have "filtered" down from the higher end sectors of the market. The artificial increase in larger units means that when these filter down to the bottom segment of the market, their size may make them too

expensive for many households, exacerbating affordability problems at the lower end of the market.

Delays in the approvals process are similar to fees, in that they increase the cost of development. The expected value of this loss is also a "cost" of development and will have the same effect on the housing market that higher fees do. The uncertainty associated with this process adds an additional cost. All else being equal, financial returns rise with increased risk. To compensate the developer for the risk she bears her units must either receive higher prices or she must pay less for the land. Either way the long run effect is to raise prices and rents. Developers in California and Vancouver have indicated in interviews that while they would prefer not to pay fees, uncertainty in the development process is a much greater cost for them.

C. Regulation of Construction: Building and Design Codes

Most of the discussion to this point addresses municipal regulations which primarily affect the supply of new single family units in suburban areas. In contrast, building and design codes directly limit the market provision of affordable rental units in older urban areas. Most of these codes were developed to improve public health and safety by controlling the spread of disease and reducing fire hazards. The current manifestations of this public interest are a web of rules dictating the materials used, construction methods followed, and architectural designs in the construction of new units and rehabilitation of older units. The problem with most codes is that they tend to reflect standards appropriate for new middle-class housing, which is unlikely to be what the market would naturally provide for lower quality and less expensive units.

Requiring that residences for poorer households meet higher quality standards than these households would demand on their own reduces the possibility of market provision of rehabilitated units for this segment of the market. Walden (1987) fails to find a correlation between building codes and prices and rents, but he does demonstrate that codes force households to consume more quality than they would optimally choose of their own volition. Upgrading existing low quality units to the higher standards for plumbing, heating, and wiring can cost more than it does to provide these services in a new unit and makes market provision unlikely. Testimony before the 1991 Kean Commission in the U.S. on regulatory

barriers to affordable housing highlights the deleterious effect well intentioned codes can have on the rehabilitation of older housing stock and the supply of rental units for poorer urban residents.[5] Though markets have not historically supplied new housing for the lowest segment of the market, rehabilitation of deteriorated buildings is an important aspect of increases in the supply of low-end units. Requiring these units to meet high quality standards increases the cost of renovating these units and ultimately reduces rehabilitation. The mechanism through which codes affect the housing market is identical to that described above for DCCs and fees. In both cases regulations increase construction costs. The difference is that here the negative impact is felt almost entirely by poor households.

D. Rent Control

Though economists are well parodied for their inability to agree with one another, there is nearly unanimous agreement among economists that rent control harms housing markets.[6] Theory is quite adamant that in its pure form rent controls discourage mobility, reduce maintenance, and dampen new construction. These negative effects vary with the type of restrictions imposed on the market. There is a large variance across North America in the type of controls imposed by local and regional governments, and a review of rent control in Canada can be found in Muller (1989). However, as a result of this diversity and the difficulty in developing a clean test of the effects of rent controls, the empirical evidence has been weaker than expected (Olsen, 1990).

Recent theoretical work indicates that moderate and well planned forms of intervention into rental markets can yield positive benefits. As reviewed by Arnott (1995), one of the criteria for this benefit is that allowances must be made for landlords to obtain a competitive return on investments in maintenance and improvements. Also, there must be some mechanism for rents to rise over time. Igarashi and Arnott (1994) demonstrate that the

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In the case of the construction of a new single room only (SRO) hotel in San Diego exemptions from certain codes reduced per unit construction costs by 60 percent and made the development of housing for the poorest renters economically feasible. See Kean Commission (1991), Ch.3, p. 4 for a description of this example.

Alston, Kearl, and Vaughan (1992) found that 93.5 percent of economists surveyed agreed that rent controls reduce housing quantity and quality.

benefits of rent control under these restrictions result from a reduction in the local monopoly power of landlords. Housing units are differentiated by quality and location. This gives a landlord local market power, though free entry of new rental units eliminates monopoly profits. The combination of this power, search costs, and asymmetries between landlords and tenants over both unit and tenant quality lead to market inefficiencies. Under certain circumstances, moderate rent controls reduce these inefficiencies and improve overall welfare. However, this type of analysis does not address the distributional and equity effects of rent control.

It is rare that the most indigent renters benefit from rent control. While usually promoted as a technique for assisting low income renters during periods of rapid escalation in market rents, the long run effect of rent control on poorer households can be quite negative. With declines in household mobility, rent control units fail to become vacant when the incomes of existing tenants rise. The advantage of the below market rent dominates the loss in utility from the inappropriate unit or location. Even if a unit becomes vacant, a poor renter is less likely to obtain the unit than a wealthier renter. Rent control units cannot be rationed by price, so landlords select other measures over which to allocate units among prospective renters. Casual empiricism and personal anecdote find income to be a common measure: landlords choose to rent to richer applicants to reduce a perceived risk of damage and reduce the interval before the unit becomes vacant again.[7]

4. Measuring of Affordability in Canadian Cities

The period between 1980 and 1990 saw clear declines in affordability. Among the leading causes of this decline were the entry of baby-boomers into the period of their lives when household formation and home ownership rates tended to increase. Also, the transformation of the Canadian economy with increased international trade and downsizing in manufacturing reeked havoc on blue-collar incomes. The former acted to increase house prices and rents, while the latter hurt incomes at the bottom end of the income distribution.

A 1988 KPMG Peat Marwick study in New York City found that 45 percent of the monetary benefits of rent control accrued to a relatively small group of renters - 14 percent of all renters who had average incomes in excess of $C 65,000 (1995 dollars). See Kean (1991), p.3-14.

Both reduced affordability for renters and prospective first time buyers.

Figure 1 presents changes in real family incomes in five major Canadian cities between 1980 and 1990 by tenure class, where families are grouped into owners, renters, and an additional class identified as poor renters (the poorest 25 percent of renter families). While owner incomes rose over the decade, those of renters fell by 4.3 percent, and those of poor renters fell by more. Under these conditions it is hard to imagine affordability for both renters and first time buyers improving.

The factors which affect renter affordability differ from those which limit the ability of renters to make the transition to homeownership. As a result, the discussion which follows is divided into separate sections for renters and owners. The primary source of data are the family files from the Canadian Census Public Use Micro-Sample. The use of census data limits the analysis to a limited number of metropolitan areas (CMAs) and the census years 1981, 1986, and 1991, but allows us to look at sub-groups of renters. House price data from the census are not used because owner-estimated house prices are censored at values too low for meaningful analysis in high price cities like Toronto and Vancouver. Instead, CMHC house price data on units insured under the National Housing Act (NHA) are used. Unlike Multiple Listing Service (MLS) averages, these are explicitly for homes purchased by first-time buyers.

A. The Availability of Affordable Rental Units

There is notable variation across Canada in the level of access to affordable rental units. While the rental burden of the typical renter differs by city, the problem of affordability is primarily limited to poorer renters regardless of their location. Between 1981 and 1991 the typical share of income paid in rent by poor renters increased much more than was the case for all other renters. One challenge in determining whether there is a problem of access to affordable rental shelter is to develop an acceptable all-inclusive definition of affordability. The measure of affordability used here is the share of income paid by the typical renter. An advantage of this measure is that unlike defining affordability based on a fixed share of income, say 30 percent, this approach indicates the extent to which renters may be paying a greater or lesser share of their income in rent.

Figure 2 presents details on typical rental burdens in five major Canadian cities.

These are the share of family income paid in rent by the typical (median) renter family. The typical renter burden is approximately 20 percent of income, well below the 30 percent level that is considered to identify the start of affordability problems. With the exception of Calgary, these burdens rose slightly between 1981 and 1986 and have remained stable since then. However, all renters are not the same.

Housing affordability is a critical problem for poorer Canadians. Figure 3 compares the typical burdens in 1991 for all renter families and the poorest 25 percent of renter families. The difference is striking. Uniformly across these cities the typical poor renter family is paying almost twice as much of their income in rent as is the typical renter family. The rental burdens for the poorest 25 percent of renter families are well over twice that of all renters and across cities the typical burden for poor renters increased over the decade by nearly three times as much as it did for all renters. Figure 4 shows rent as a percent of income for the typical poor renter in 1981, 1986, and 1991. The typical rental burdens among the poorest 25 percent of renter families increased over the decade by nearly three times as much as it did for renters overall. In 1981, the median rental burden of poor renters was below 40 percent in over half of the largest 12 Canadian metropolitan areas. By 1991, it exceeded 45 percent in over half of these CMAs.

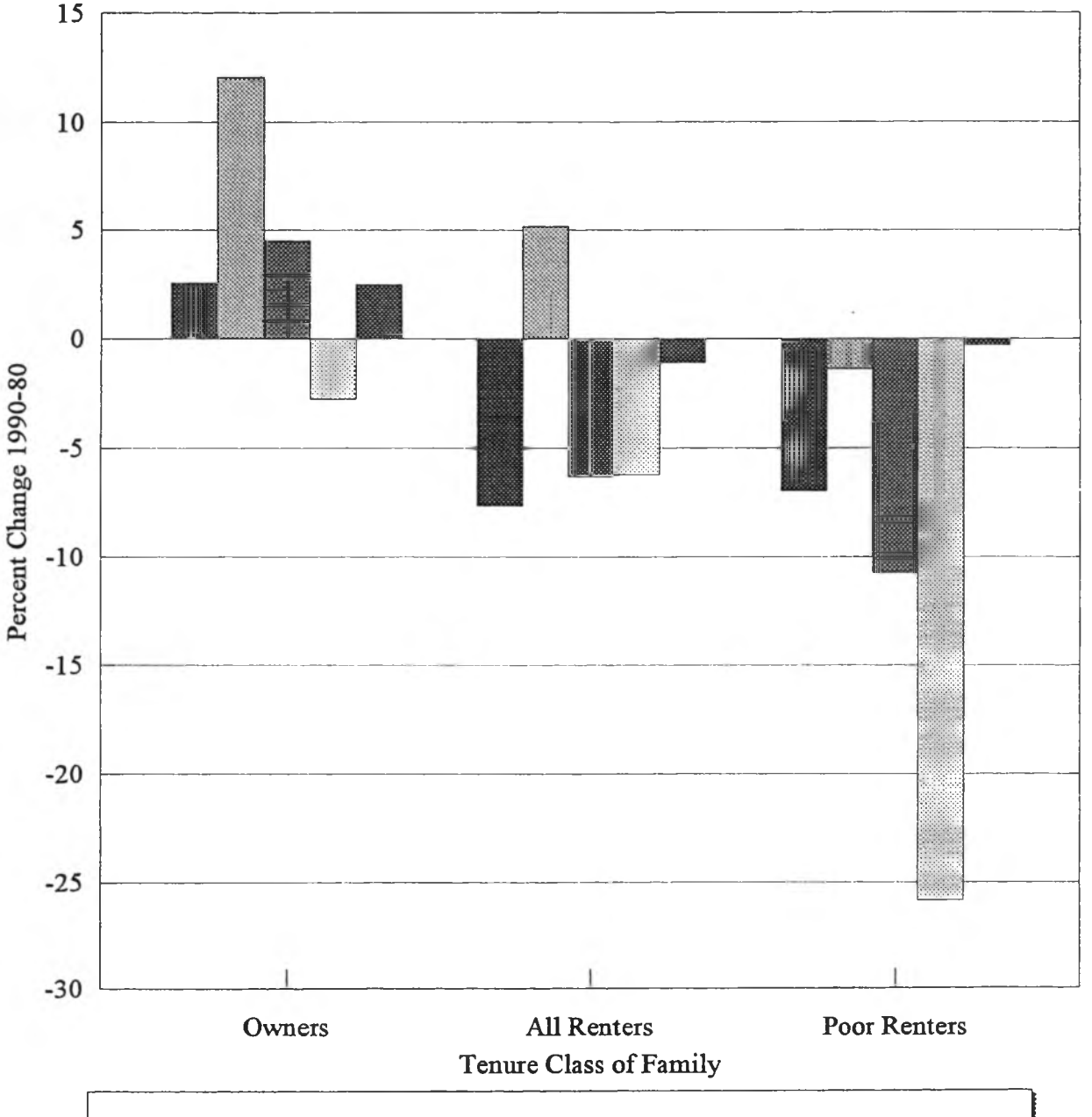
Part of the increase in affordability problems reflects an improvement in the quality of rental units. For both the subset of poor renters and all renters, the average size of rental units increased between 1981 and 1991 by 4.3 and 5.1 percent respectively. Particularly striking is that the three cities with the largest increases in burdens for poor renters - Hamilton, London, and Winnipeg - also had the largest increases, over 10 percent, in the size of units occupied by poor renters. If this increase reflects the preferences of these households, there would be no reason for concern. However, if the absence of smaller units forces poor renters to consume more space then they prefer, then this change reflects a true decrease in affordability. It is the difference between paying 45 percent of one's income for shelter because one wants to consume a lot of housing and doing so because there are no options to occupy smaller or lower quality units.

B. The Affordability of Homeownership

Over the 1980's, increases in house prices outstripped changes in renter income

Figure 1 - Income Growth 1980-90 by Tenure

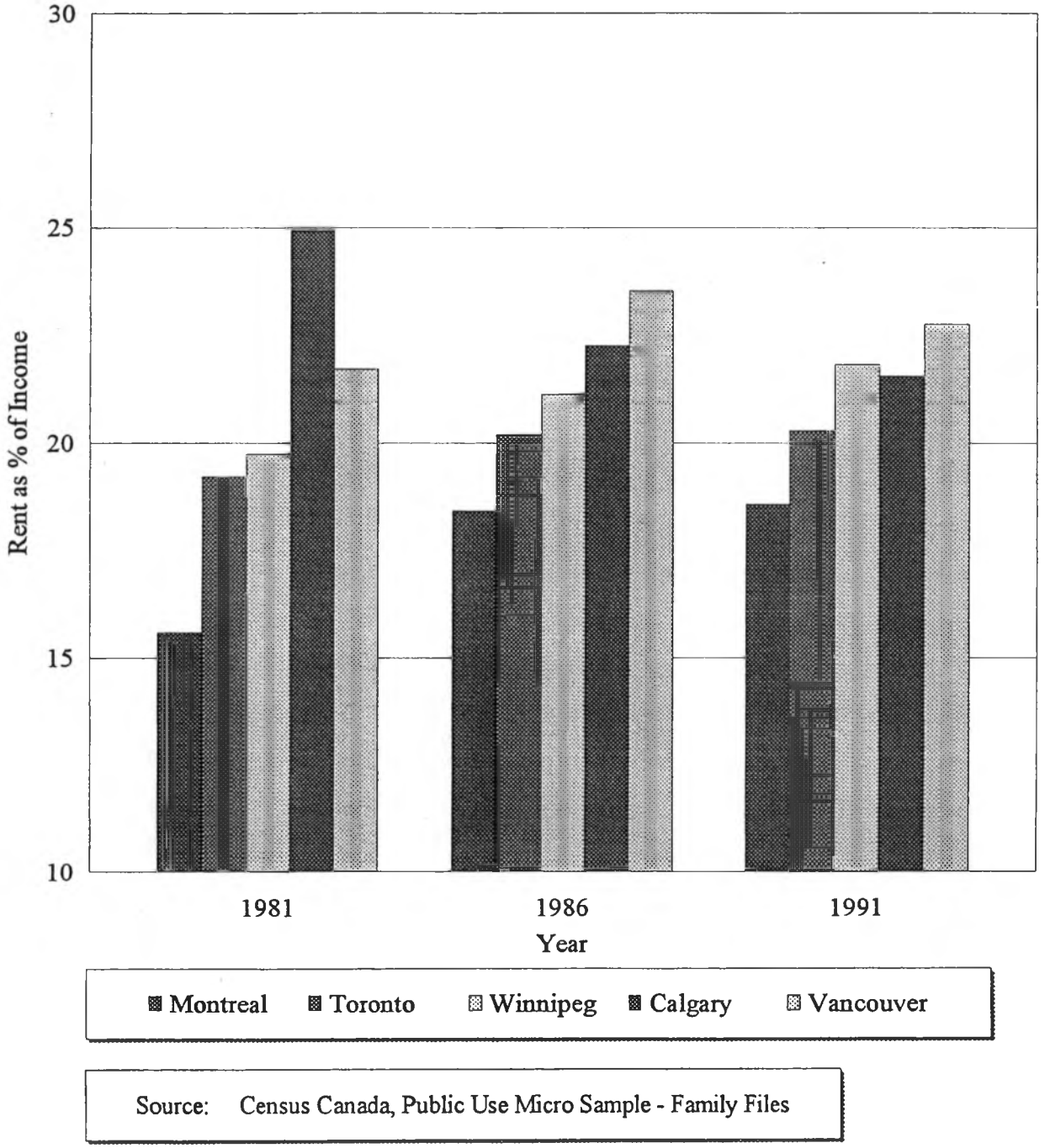
Median Income in Constant $1993



Poor renters are the bottom 25% of the renter family income distribution.
Source: Census Canada, Public Use Micro Sample - Family Files

Figure 2 - Rental Burden - All Renters

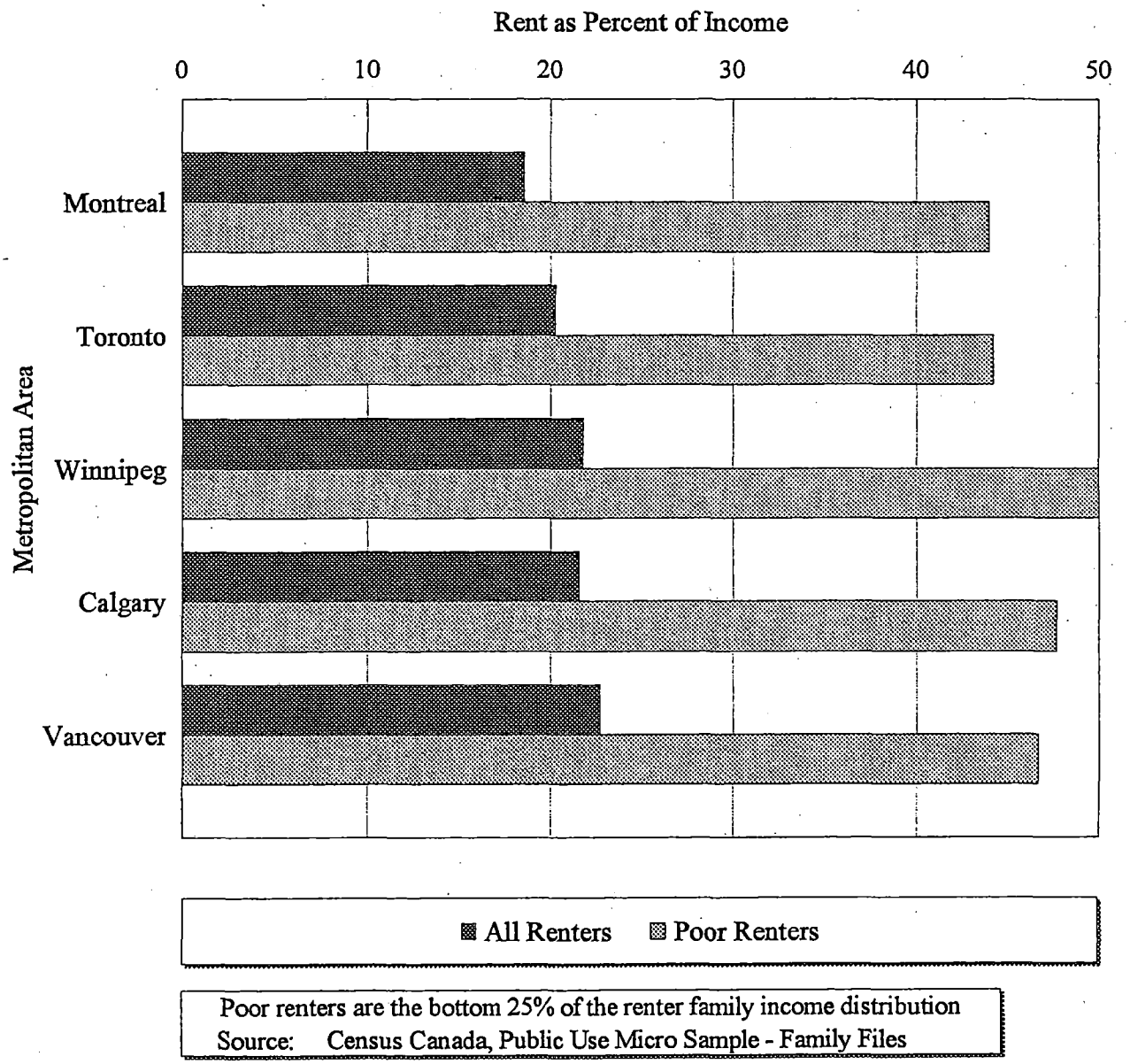
Rent as Percent of Family Income for All Renters



Source: Census Canada, Public Use Micro Sample - Family Files

Figure 3 - Comparing Rental Burdens

All Renters vs Poor Renters - 1991

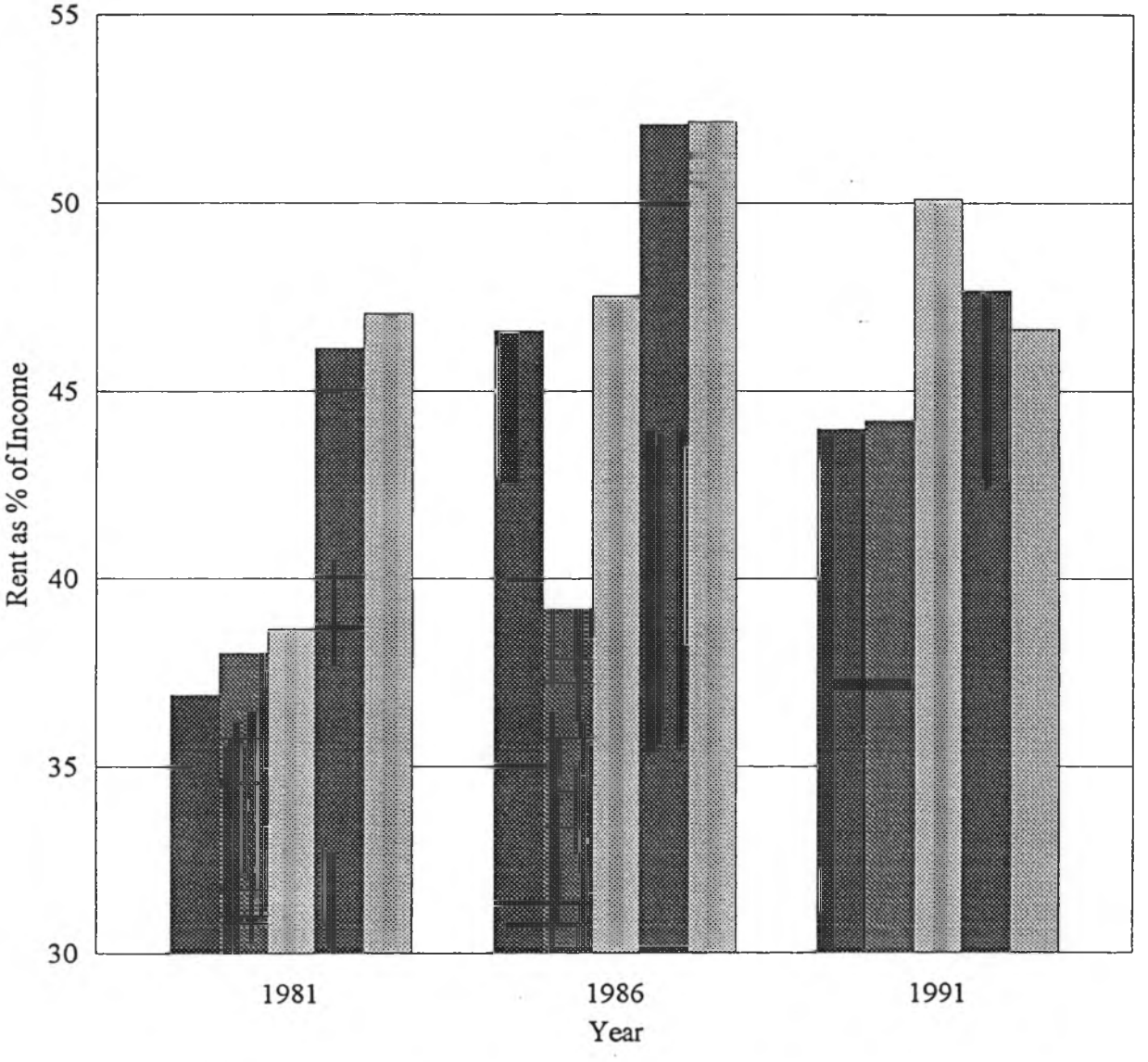


Poor renters are the bottom 25% of the renter family income distribution

Source: Census Canada, Public Use Micro Sample - Family Files

Figure 4 - Rental Burden - Poor Renters

Rent as Percent of Family Income for Poor Renters



Poor renters are the bottom 25% of the renter family income distribution.

Source: Census Canada, Public Use Micro Sample - Family Files

making homeownership less accessible. This dynamic is highlighted in Figure 5. Even in Winnipeg, where real price increases were low, real incomes of renters failed to keep pace. The problem was particularly acute in Ontario, where real prices skyrocketed in the second half of the 1980's. As a result, the percentage of young renter families, those aged 25-44, who could qualify for a 10 percent down mortgage fell over the decade. Figure 6 highlights this decline. The exit from the 1980-82 recession and the decline in interest rates improved affordability across the board between 1980 and 1985. But the sharp house price increases in the second half of the decade eliminated this gain. The drop in affordability is particularly acute in the cities with the largest growth in house prices: Toronto and Vancouver. In Toronto, less than 10 percent of renters could afford the mortgage they would need to buy a unit in 1990.

These data are based on the average price of homes purchased with National Housing Act (NHA) insurance. While using NHA prices explicitly limits the sample of houses to those purchased by first time buyers, it can also underestimate the extent of the affordability problem. In particular, the sample is likely to be biased against higher priced cities. Figure 7 compares 1990 average NHA prices with average Multiple Listing Service (MLS) prices, which reflect nearly all existing units sold. For Toronto and Vancouver the difference between these two is in excess of $40,000.

Whether we look at both new and existing units, control for quality or not, or use either the MLS or NHA insured average house prices, the evidence is inescapable that in most Canadian housing markets in the 1980's, homeownership became increasingly unaffordable for potential first time homebuyers. The decline in real renter incomes over the decade meant that affordability was likely to fall. However, in Ontario and British Columbia even the most rapid increases in income would have been unable to offset the rapid increases in house prices.

Increases in average house size over the decade exacerbated the affordability problem. While the average size of existing units purchased with NHA insurance rose modestly over the period, increases were largest in the two most expensive markets, Toronto and Vancouver, where average size rose 37 and 22 percent respectively. More worrisome is the much larger increase in the size of new units, which rose nationally in major CMAs by nearly 17 percent.

The sizes of existing homes are a function of construction and demolition patterns over the last century. It is the characteristics of new homes that will determine the attributes of the stock of existing units in the future. If larger and larger units are built, then renter incomes will have to increase even faster to make home ownership possible.[8]

5. Trends in Affordability: Evidence on the Effects of Regulations

Macro-economic forces such as changes in incomes, interest rates, population, and capital are the major driving force behind short-run movements in affordability. The decline in real incomes of poorer Canadians over the 1980's guaranteed that rent burdens for these households would worsen. The dominance of these forces makes it difficult to identify the subtle effects that municipal growth, land use, building and design code, and rent regulation exert on affordability, particularly since regulations have their greatest impact during periods when demand is high and both prices and rents would be rising anyway. For instance, the large flow of wealthy immigrants from the Pacific Rim into Vancouver in the second half of the 1980's would have raised real estate prices independent of municipal regulations. Nonetheless, there are a number of secular trends in housing markets which are consistent with the negative effects expected from the types of municipal regulations identified here.

In most cases, municipal regulations reduce affordability by encouraging the construction and development of residential units which are too costly for poorer households. With the exception of explicit limits on residential growth, regulations do not directly effect house prices and rents. Most regulations lead to higher prices through reductions in the growth rate of supply because less land is developed. Municipal regulations also tend to encourage the construction and development of larger and more costly units than would otherwise occur, limiting the development of more affordable higher density units. The aggregate evidence is consistent with this story. Declines in household size and in real renter

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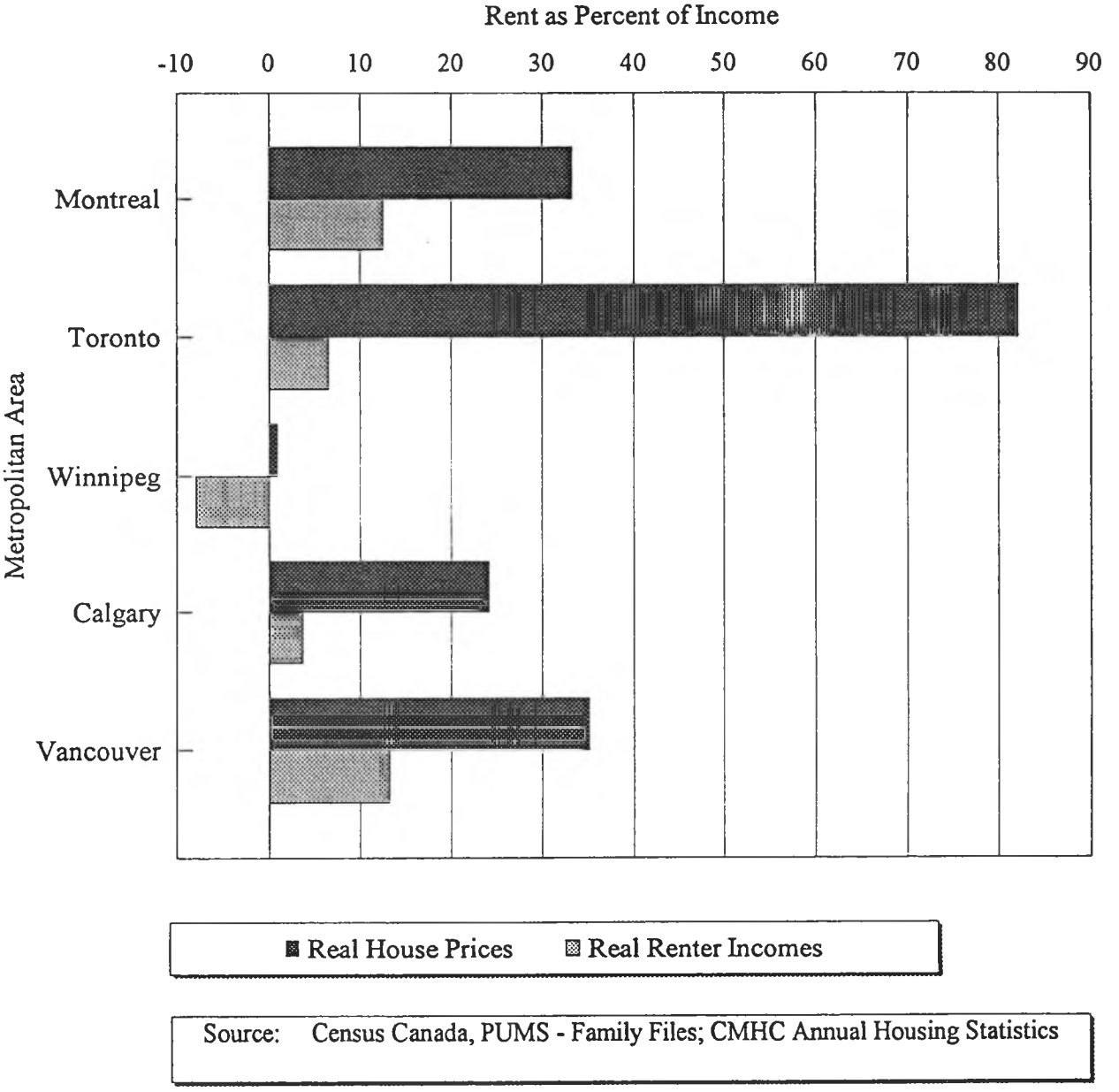
The dynamics of this process are particularly acute in parts of Vancouver, where smaller 100-145 m^2 homes are being torn and replaced by units of at least 250 m^2. This process is helping to ensure that neighborhoods which were accessible to first time buyers at one time are no longer so. As a consequence, to find affordable detached units, first time buyers are forced to locate at tremendous distances from the traditional centers of employment.

Figure 5 - Declining Access to Homeownership

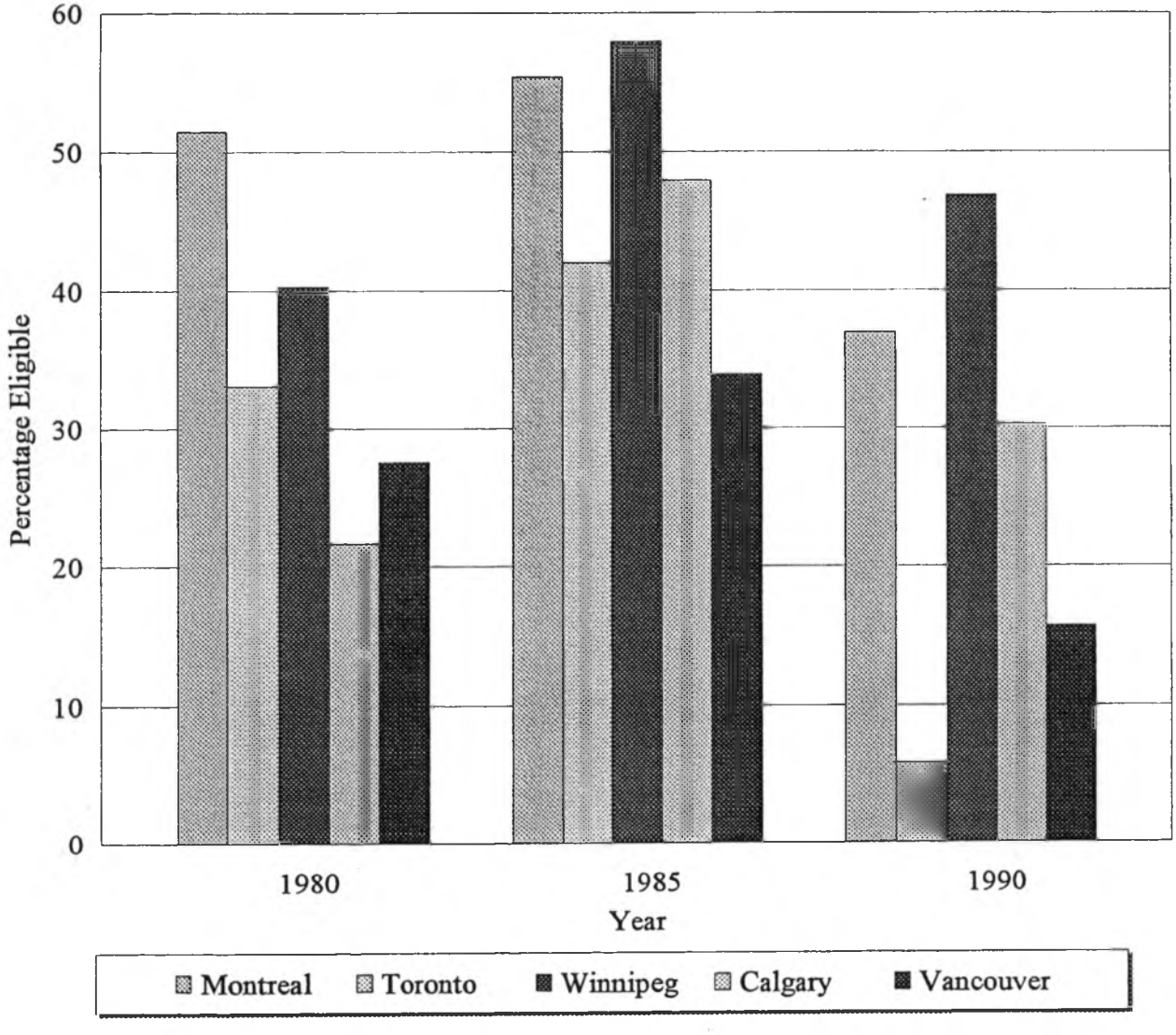
Real House Prices vs Real Renter Income Growth - 1985-90



Source: Census Canada, PUMS - Family Files; CMHC Annual Housing Statistics

Figure 6 - Homeownership Affordability

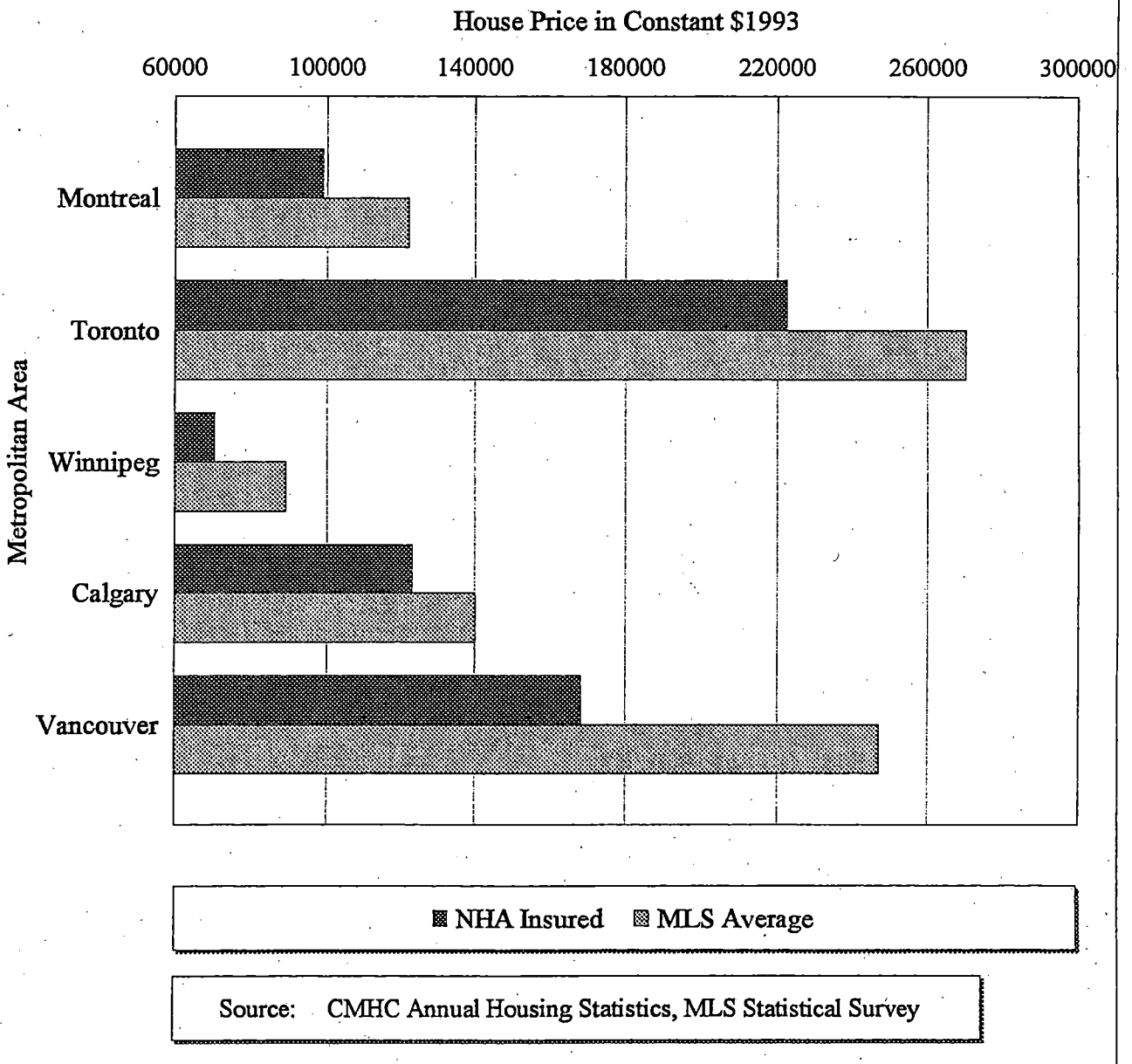
Percent of Young Renter Families Qualifying for Mortgage



Percentage of 25--44 year old renter families whose income is high enough to receive a 10% down mortgage sufficient to purchase the average NHA insured existing home

Figure 7 - Comparing House Prices

Average NHA Insured vs MLS Average - 1990



Source: CMHC Annual Housing Statistics, MLS Statistical Survey

incomes should have led to higher demand for smaller units. Also, higher rents and prices should have led to increases in smaller new units. However, the size of new homes and of rental units increased over this period. The fact that the size of both types of units rose despite the prevailing economic and housing market conditions suggests that regulations are likely to have had an effect. All of these contribute to the worsening affordability problems of poorer renters and make the transition from renting to owning less likely.

Appendix 1 - Defining Affordability

A basic problem in analyzing rental affordability is the absence of a single comprehensive measure of affordability. This paper uses the median share of income spent on rent, but there are alternative definitions of affordability. One measure, like the median burden figure used here, reflects the unit actually occupied by a household; a second attempts to determine, independent of who actually occupies a given unit, whether there exists a balance between renter incomes and the units available for them to rent; and a third defines affordability by asking whether, after adjusting for the rental payment for a minimum quality unit, a household's remaining income is sufficient to purchase a given quantity of non-housing goods. The basic conclusions reached by these different approaches are fairly similar, but each highlights a different aspect of the problem of affordable rental housing.

The conventional definition of affordability for rental housing is that rent payments should not exceed 30 percent of household income. This standard is used by CMHC and by the Department of Housing and Urban Development (HUD) in the United States. The 30 percent threshold reflects a generally accepted but still ad hoc assessment of the appropriate share of income to be spent on housing. This measure has an advantage of being quite easy to calculate from either special surveys of renters or from extracts of census public use micro samples. However there are a number of drawbacks with its use. First, rent payments of over 30 percent do not reflect a problem with affordability if a household chooses to pay this amount. We would always expect there to be some households who, for preference reasons alone, choose to consume more housing than is considered standard. Affordability is only an issue for the subset who have no choice but to pay more than 30 percent of their income in rent.

The "reallocation" method is an alternative approach which asks whether the supply of, and demand for, rental units of a given size and market segment are in balance. If the number of units affordable, using the 30 percent criteria, to renters of a given income level is less than the number of renter households in that category, then an affordability problem is said to exist. The advantage of this approach is that it avoids the bias caused by renter preferences because the focus is on units that could be occupied rather than those that are.

Nelson (1994) uses the reallocation method to compare the distribution of poor renter household income with the distribution of rental units affordable to these households. She finds that in the U.S. it is only the poorest of the low income renters who face an actual shortage of affordable rental units. A weakness of this method is that the existence of affordable units does not mean that poor households are able to occupy them. If they are occupied by higher income renters, then poorer renters will be forced to occupy more expensive units and pay a higher then desired share of their income in rent. A weakness of both this method and the prior is that they assume there exists a single fixed share of income to be spent on shelter that is appropriate for all households.[9]

The "shelter-poverty" approach to defining affordability specifically addresses the fixed share assumption. As outlined by Stone (1993), this approach defines affordability in terms of whether after achieving a certain standard of living, a household has sufficient remaining funds to rent a unit. The cost of a standard bundle of non-housing goods is subtracted from a household's income. If the remaining income is insufficient to rent a unit of a given size that meets a minimum quality standard at prevailing market rents, then the household is said to be shelter poor. The clear advantage of this approach is that affordability becomes a function of income, household size, and market rents alone, individual household preferences cannot bias the analysis. Applying this technique, Stone (1994) finds that in the aggregate the affordability problem is quite similar to the numbers found with the traditional 30 percent of income rule. However, Stone identifies a different distribution of shelter poor renters, in particular larger households. Some larger households pay less than 30 percent of their income in rents but still have an affordability problem because in order to afford non-housing essentials they are forced to dramatically under-consume housing.

Alternative measures of rental affordability give slightly different answers and address alternative aspects of the affordability problem. Ultimately either the data or the question

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This common threshold is appropriate when the income elasticity of housing services equals one, which is what early estimates found. With income elasticity equal to unity, then a given percentage increase in income leads to an identical percentage rise in payments for shelter. Subsequent analyses have found that the income elasticity for renters is actually much closer to 0.75. Thus, poorer renters will always pay a greater share of their income in rent than more wealthy households.

determine which are the most appropriate measures to use, but the general conclusions do not change. For instance, using the 30 percent of income measure, in 1981 approximately 70 percent of poor renters had rent burdens in excess of the 30 percent standard. By 1991 this figure had risen to nearly 79 percent.[10] Though these numbers differ from those in the body of this text, the implication of the data is the same as that developed using the median burden statistic: the plight of the poorest renters in Canadian metropolitan areas is acute and their condition worsened over the decade of the 1980's. The reallocation and shelter-poverty approaches reach the same general conclusions as the traditional share of income approach, but they identify different groups of poor renters who are disproportionately burdened.

This paper uses a mortgage eligibility test to define affordability, but this measure is incomplete. As Linneman and Wachter (1989) and DiPasquale, Somerville, and Cawley (1992) note, the transition to homeownership also depends on household assets and debt. There are households who have sufficiently high incomes, but are constrained by their lack of wealth or high debt loads. Attempts to increase access to homeownership by lowering one barrier may increase the likelihood that another constraint will bind a household. For instance, lowering the minimum required downpayment simultaneously raises the size of the mortgage. Though the aim of an affordability measure is to compare prices and incomes, over short periods of time these variables may exhibit minor influences on changes in the mortgage eligibility measure if interest rates are particularly volatile.

Measuring affordability by mortgage eligibility can be misleading because it is so sensitive to interest rates. For instance, with interest rates at 12 percent, the monthly payments on a 25 year $100,000 mortgage are $1,008. A decrease in interest rates to 8 percent lowers the monthly payments a mortgage of the same size to $753, which is equivalent to lowering the required minimum income level by 25 percent. It is possible for declines in interest rates to mask price increases. In the above example, if house prices increase by 28 percent, affordability as measured by the mortgage payment criteria would remain unchanged. However, the size of the required downpayment would also increase by

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In 1991 over 80 percent of poor renters exceeded the 30 percent standard in all six principal western city groups. In contrast, of the nine city groups in Ontario, this level was only exceeded in London. The presence of rent control in Ontario is a likely explanation for this difference.

the same 28 percent, shutting some renters out of the market.[11] Ultimately, data on household income is much more readily available than are wealth and debt data, so affordability tends to be measured by mortgage eligibility.

If the minimum downpayment percentage is lowered, then with falling interest rates a combination of mortgage and downpayment size can be found which unambiguously increases access to homeownership, assuming the price increase is not "too" large.

Appendix 2 - Creating an Index of Regulation

There are a number of statistical issues involved in creating a suitable index of regulation. The biggest challenge is determining the appropriate weight assigned to each of the variables which comprise the index. For a measure like the consumer price index (CPI), it is a straightforward procedure to determine this weighting. Statistics Canada forms the CPI from the prices of goods purchased by households. The weights for these prices are determined from surveys of consumer expenditures: the weight assigned to the price of a given good, say milk, reflects the percentage of total household expenditures spent on milk. However, it is impossible to perfectly replicate this methodology for regulation because we lack both a defined aggregate measure, like total household expenditures, on which to base the weighting and a set of easily observed variables which fully describe the regulatory environment, as prices do for the CPI.

The proposed survey would generate the variables that describe the regulatory environment. Examples of the type of questions in the survey include: What percentage of rezonings for multifamily units are approved? What is the typical length of time for a decision on a multifamily permit? How many times in the last year has the general plan been amended? What percentage of rezoning applications are consistent with the plan? What percentage of approvals require single agency approval? How many hearings constitute the approvals process? The answers to these questions are quantitative measures, which are combined to create the index itself.

Economic theory motivates the methodology for constructing the measure of the regulatory environment. Theory suggests that regulations affect affordability by raising house prices. So the measure of the regulatory environment is generated from an economic model of housing prices which includes the survey regulation variables. Estimation of this model produces a set of weights for the regulation variables, which reflects their contributions to higher house prices. We then apply these weights directly to the regulation variables, generating a single variable which describes the regulatory environment. An advantage of this approach over a naive summation of the values of the regulation variables is that we assign greater weights to those variables which have a larger effect on house prices. This

process can be repeated for other effects of regulation, such as rents, house size, or multifamily starts, with the resulting measures left as individual indexes or aggregated together into a single index.

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Table 1
Median Rent Burden - All Renter Families
Rent as a Percent of Income

CMA	1991	1986	1981	Change in Pct Points 1981-91	1986-91
Halifax	21.1%	21.6%	19.0%	2.1	-0.4
Quebec City	18.4%	18.6%	15.9%	2.5	-0.2
Montreal	18.6%	18.4%	15.6%	3.0	0.1
Sherbrooke/Trois-Riveres	20.4%				
Ottawa-Hull	19.0%	20.4%	18.2%	0.8	-1.4
Oshawa	21.3%				
Toronto	20.3%	20.2%	19.2%	1.1	0.1
Hamilton	19.7%	19.5%	17.3%	2.5	0.3
St. Catherines/Niagara	21.1%	19.6%	20.0%	1.1	1.4
Kitchener	20.2%	20.1%	18.1%	2.1	0.1
London	20.8%	20.6%	19.1%	1.7	0.2
Windsor	20.9%	19.1%			1.8
Sudbury/Thunder Bay	20.0%				
Winnipeg	21.8%	21.1%	19.7%	2.1	0.7
Regina/Saskatoon	21.6%				
Calgary	21.6%	22.3%	24.9%	-3.4	-0.7
Edmonton	21.1%	23.7%	21.4%	-0.3	-2.6
Vancouver	22.8%	23.5%	21.7%	1.0	-0.8
Victoria	22.0%	25.9%			-3.9
Average*	20.0%	20.3%	18.4%	1.6	-0.3

Notes: Income excludes investment and self-employment losses and is for previous year
Average* - calculated only for those CMAs identfied in the 1981 file.

Source: Canadian Census Public Use Micro-Sample , Family Files

Table 2
Median Rent Burden - Poorest 25% of Renter Families
Rent as a Percent of Income

CMA	1991	1986	1981	Change in Pct Points 1981-91	1986-91
Halifax	52.9%	43.6%	56.7%	-3.9	9.3
Quebec City	39.2%	44.0%	33.9%	5.4	-4.8
Montreal	44.0%	46.6%	36.9%	7.1	-2.6
Sherbrooke/Trois-Riveres	42.1%				
Ottawa-Hull	40.6%	38.0%	39.9%	0.6	2.5
Oshawa	47.8%				
Toronto	44.2%	39.2%	38.0%	6.2	5.0
Hamilton	44.0%	39.1%	36.1%	7.9	4.8
St. Catherines/Niagara	45.4%	43.4%	49.1%	-3.7	2.0
Kitchener	41.0%	36.8%	37.2%	3.8	4.2
London	42.8%	40.7%	34.0%	8.8	2.1
Windsor	42.6%	41.1%			1.4
Sudbury/Thunder Bay	40.9%				
Winnipeg	50.1%	47.6%	38.6%	11.5	2.6
Regina/Saskatoon	47.3%				
Calgary	47.7%	52.1%	46.2%	1.5	-4.4
Edmonton	46.7%	51.3%	47.3%	-0.7	-4.6
Vancouver	46.7%	52.1%	47.1%	-0.4	-5.5
Victoria	44.7%	50.0%			-5.2
Average*	44.9%	44.7%	39.5%	5.4	0.2

Notes: Income excludes investment and self-employment losses and is for previous year
Average* - calculated only for those CMAs identfied in the 1981 file.

Source: Canadian Census Public Use Micro-Sample , Family Files

Table 3
Pecentage of Renters Paying More Than 30% of Income on Rent
Poorest 25 % of Renter Families

CMA	1991	1986	1981	Change in Pct Points 1981-91	1986-91
Halifax	84.0%	84.4%	89.7%	-5.7	-0.4
Quebec City	74.4%	82.3%	59.8%	14.6	-7.9
Montreal	81.7%	86.1%	67.8%	13.9	-4.4
Sherbrooke/Trois-Riveres	80.0%				
Ottawa-Hull	71.5%	67.6%	68.5%	3.0	3.8
Oshawa	78.9%				
Toronto	73.9%	69.1%	67.3%	6.6	4.8
Hamilton	74.1%	76.1%	64.9%	9.2	-1.9
St. Catherines/Niagara	74.3%	70.7%	91.3%	-17.0	3.6
Kitchener	70.9%	72.0%	74.2%	-3.3	-1.1
London	82.6%	81.3%	65.9%	16.7	1.3
Windsor	72.4%	64.5%			7.9
Sudbury/Thunder Bay	71.6%				
Winnipeg	89.8%	88.4%	67.5%	22.3	1.4
Regina/Saskatoon	87.6%				
Calgary	84.0%	83.7%	83.1%	0.9	0.3
Edmonton	85.7%	97.2%	83.3%	2.3	-11.5
Vancouver	81.5%	90.3%	79.7%	1.7	-8.8
Victoria	80.6%	92.1%			-11.5
Average*	78.8%	80.3%	70.1%	8.7	-1.5

Notes: Income excludes investment and self-employment losses and is for previous year
Average* - calculated only for those CMAs identfied in the 1981 file.

Source: Canadian Census Public Use Micro-Sample , Family Files

Table 4
Percent of Renters Qualifying for Mortgage
Average Existing Unit -10% Downpayment

CMA	1990	1985	1980	Change in Pct Points 1981-91	1986-91
Halifax	47.4%	46.8%	40.8%	6.6	0.6
Quebec City	49.2%	66.8%	53.8%	-4.5	-17.5
Montreal	37.0%	55.4%	51.5%	-14.5	-18.4
Sherbrooke/Trois-Riveres	41.9%				
Ottawa-Hull	39.3%	45.3%	49.4%	-10.1	-6.0
Oshawa	15.3%				
Toronto	5.8%	42.0%	33.1%	-27.3	-36.2
Hamilton	16.6%	57.2%	58.4%	-41.9	-40.6
St. Catherines/Niagara	25.9%	55.9%	45.3%	-19.4	-30.0
Kitchener	11.5%	58.2%	47.0%	-35.5	-46.7
London	21.4%	49.0%	45.6%	-24.2	-27.6
Windsor	35.1%	69.2%			-34.0
Sudbury/Thunder Bay	40.1%				
Winnipeg	46.8%	58.0%	40.3%	6.5	-11.1
Regina/Saskatoon	51.0%				
Calgary	30.3%	47.9%	21.7%	8.6	-17.6
Edmonton	36.9%	44.6%	16.7%	20.2	-7.7
Vancouver	15.7%	33.9%	27.6%	-11.9	-18.2
Victoria	22.1%	34.2%			-12.1
Average*	25.4%	48.5%	40.8%	-15.4	-23.1

Notes: Renter families ages 25-44. If mortgage payments with 10% downpayment and property tax are less than 32 percent of income, the household can afford ownership. Prices are average price by CMA of existing units financed with NHA insured mortgages. Average* - calculated only for those CMAs identfied in the 1981 file.

Source: Canadian Census Public Use Micro-Sample , Family Files

Table 5
Average House Size

CMA	1990	1985	1980	Percent Change 1980-90	1985-90
Existing Units					
Halifax	99.9	95.6	100.4	-0.5%	4.5%
Quebec City	93.6	92.9	99.7	-6.1%	0.8%
Montreal	95.4	100.1	107.7	-11.4%	-4.7%
Sherbrooke/Trois-Rivieres	98.3	102.3	102	-3.6%	-3.9%
Ottawa-Hull	107.9	111.6	108.2	-0.3%	-3.3%
Oshawa	120.2	103.5	106.5	12.9%	16.1%
Toronto	148.3	111.1	108.3	36.9%	33.5%
Hamilton	101.5	109.9	102.7	-1.2%	-7.6%
St. Catherine/Niagara	101.4	102	100.4	1.0%	-0.6%
Kitchener	121.9	107.4	103.1	18.2%	13.5%
London	108.4	95.4	103.1	5.1%	13.6%
Windsor	99	99.3	93.3	6.1%	-0.3%
Sudbury/Thunder Bay	98.3	102.9	95.8	2.6%	-4.5%
Winnipeg	94.1	94.3	92.5	1.7%	-0.2%
Regina/Saskatoon	98.9	94.6	92.6	6.8%	4.5%
Calgary	102.8	105.5	93.6	9.8%	-2.6%
Edmonton	105.3	112.5	95.4	10.4%	-6.4%
Vancouver	117	116.7	96.3	21.5%	0.3%
Victoria	112.9	119.1	102.8	9.8%	-5.2%
Average	106.6	104.0	100.2	6.3%	2.4%
Average - Ontario/BC	112.4	107.2	101.9	10.4%	4.9%
New Units					
Halifax	107.9	113.2	95.5	13.0%	-4.7%
Quebec City	93	90.2	101.4	-8.3%	3.1%
Montreal	99	101.3	102.7	-3.6%	-2.3%
Sherbrooke/Trois-Rivieres	98.7	103.4	95.2	3.7%	-4.5%
Ottawa-Hull	123.8	126.2	130.1	-4.8%	-1.9%
Oshawa	164.4	122.4	130	26.5%	34.3%
Toronto	188.7	152.7	144.6	30.5%	23.6%
Hamilton	168.1	146.7	112.4	49.6%	14.6%
St. Catherine/Niagara	106.1	133	113.2	-6.3%	-20.2%
Kitchener	143.7	111.1	113	27.2%	29.3%
London	147.1	113.9	109.2	34.7%	29.1%
Windsor	123.4	116.4	101.2	21.9%	6.0%
Sudbury/Thunder Bay	118.2	106.6	98.9	19.5%	10.9%
Winnipeg	102.2	105.8	98.5	3.8%	-3.4%
Regina/Saskatoon	147.6	100.2	99.9	47.7%	47.3%
Calgary	133.1	135.2	104.7	27.1%	-1.6%
Edmonton	130.9	118.7	107.5	21.8%	10.3%
Vancouver	162.1	133.9	121.2	33.7%	21.1%
Victoria	110.5	136.6	131.9	-16.2%	-19.1%
Average	129.9	119.3	111.1	16.9%	8.9%
Average - Ontario/BC	141.5	127.2	118.7	19.2%	11.2%

Source: Houses financed under National Housing Act, CMHC Annual Housing Statistics

Table 6
Percent of Renters Qualifying for Mortgage
Quality Controlled Existing Unit -10% Down

CMA	1990	1985	1980	Change in Pct Points 1981-91	1986-91
Halifax	45.8%	41.0%	39.2%	6.6	4.8
Quebec City	43.7%	61.1%	50.4%	-6.7	-17.5
Montreal	32.1%	53.6%	53.7%	-21.6	-21.4
Sherbrooke/Trois-Riveres	38.1%				
Ottawa-Hull	42.7%	52.4%	53.5%	-10.8	-9.7
Oshawa	24.3%				
Toronto	22.7%	46.1%	36.8%	-14.1	-23.4
Hamilton	16.3%	60.2%	58.4%	-42.1	-43.9
St. Catherines/Niagara	24.8%	55.0%	42.4%	-17.6	-30.2
Kitchener	23.2%	60.5%	47.0%	-23.8	-37.3
London	23.6%	44.5%	45.6%	-22.0	-20.9
Windsor	30.9%	69.2%			-38.3
Sudbury/Thunder Bay	37.5%				
Winnipeg	41.4%	53.0%	34.3%	7.0	-11.7
Regina/Saskatoon	49.4%				
Calgary	29.8%	49.0%	16.5%	13.3	-19.2
Edmonton	38.1%	48.4%	13.1%	25.0	-10.3
Vancouver	23.0%	43.5%	23.6%	-0.6	-20.5
Victoria	28.9%	45.6%			-16.7
Average*	29.6%	50.2%	41.4%	-11.8	-20.6

Notes: Renter families ages 25-44. If mortgage payments with 10% downpayment and property tax are less than 32 percent of income, the household can afford ownership. Prices are constant size price by CMA of existing units financed with NHA insured mortgages. Average* - calculated only for those CMAs identfied in the 1981 file.

Source: Canadian Census Public Use Micro-Sample , Family Files

Table 7
Rooms per Unit - Poorest 25 % of Renter Families

CMA	1991	1986	1981	Percentage Change 1981-91	Percentage Change 1986-91
Halifax	5.01	4.62	4.61	8.7%	8.4%
Quebec City	4.28	4.20	4.22	1.4%	1.9%
Montreal	4.24	4.24	4.24	0.0%	0.0%
Sherbrooke/Trois-Riveres	4.30				
Ottawa-Hull	4.82	4.52	4.51	6.9%	6.6%
Oshawa	5.17				
Toronto	4.56	4.38	4.48	1.8%	4.1%
Hamilton	5.05	4.83	4.51	12.0%	4.6%
St. Catherines/Niagara	5.01	5.22	4.79	4.6%	-4.0%
Kitchener	5.17	4.92	4.75	8.8%	5.1%
London	5.11	5.13	4.53	12.8%	-0.4%
Windsor	5.07	5.13			-1.2%
Sudbury/Thunder Bay	4.90				
Winnipeg	4.72	4.55	4.10	15.1%	3.7%
Regina/Saskatoon	5.06				
Calgary	5.20	4.91	5.10	2.0%	5.9%
Edmonton	4.89	4.57	4.68	4.5%	7.0%
Vancouver	4.71	4.36	4.32	9.0%	8.0%
Victoria	4.54	4.52			0.4%
Average*	4.61	4.44	4.42	4.3%	3.8%

Notes: Average* - calculated only for those CMAs identfied in the 1981 file.

Source: Canadian Census Public Use Micro-Sample , Family Files

Table 8
Average House Price - Existing Units
In 1993 Dollars

CMA	1990	1985	1980	Percent Change 1980-90	Percent Change 1985-90
Halifax	$91,437	$97,793	$89,489	2.2%	-6.5%
Quebec City	$77,007	$66,466	$81,517	-5.5%	15.9%
Montreal	$98,983	$74,332	$80,757	22.6%	33.2%
Sherbrooke/Trois-Rivieres	$75,152	$62,130	$68,875	9.1%	21.0%
Ottawa-Hull	$114,310	$107,922	$88,233	29.6%	5.9%
Oshawa	$171,659	$100,087	$99,166	73.1%	71.5%
Toronto	$222,605	$122,262	$115,501	92.7%	82.1%
Hamilton	$144,072	$79,892	$80,786	78.3%	80.3%
St. Catherine/Niagara	$109,427	$66,494	$72,884	50.1%	64.6%
Kitchener	$154,078	$79,620	$85,014	81.2%	93.5%
London	$127,911	$77,272	$85,594	49.4%	65.5%
Windsor	$92,592	$64,206	$85,036	8.9%	44.2%
Sudbury/Thunder Bay	$94,574	$63,855	$77,829	21.5%	48.1%
Winnipeg	$70,545	$69,950	$80,636	-12.5%	0.9%
Regina/Saskatoon	$66,113	$76,988	$87,246	-24.2%	-14.1%
Calgary	$123,128	$99,200	$140,632	-12.4%	24.1%
Edmonton	$101,592	$96,779	$142,146	-28.5%	5.0%
Vancouver	$168,397	$124,615	$131,042	28.5%	35.1%
Victoria	$140,112	$109,931	$121,938	14.9%	27.5%
Average	$118,089	$86,305	$95,491	23.7%	36.8%

Source: Houses insured under National Housing Act, CMHC Annual Housing Statistics

Table 9
Average House Price - Existing Units
Adjusted for Size - In 1993 Dollars

CMA	1990	1985	1980	Percent Change 1980-90	Percent Change 1985-90
Halifax	$94,274	$105,363	$91,806	2.7%	-10.5%
Quebec City	$84,741	$73,692	$84,215	0.6%	15.0%
Montreal	$106,868	$81,536	$77,233	38.4%	31.1%
Sherbrooke/Trois-Rivieres	$78,745	$67,433	$69,550	13.2%	16.8%
Ottawa-Hull	$109,119	$115,912	$83,993	29.9%	-5.9%
Oshawa	$147,095	$99,603	$95,907	53.4%	47.7%
Toronto	$154,608	$113,348	$109,849	40.7%	36.4%
Hamilton	$146,201	$74,876	$81,022	80.4%	95.3%
St. Catherine/Niagara	$111,154	$67,146	$74,771	48.7%	65.5%
Kitchener	$130,189	$76,358	$84,932	53.3%	70.5%
London	$121,539	$83,428	$85,511	42.1%	45.7%
Windsor	$96,333	$66,598	$93,877	2.6%	44.6%
Sudbury/Thunder Bay	$99,096	$63,917	$83,678	18.4%	55.0%
Winnipeg	$77,217	$76,403	$89,789	-14.0%	1.1%
Regina/Saskatoon	$68,854	$83,824	$97,045	-29.0%	-17.9%
Calgary	$123,368	$96,849	$154,755	-20.3%	27.4%
Edmonton	$99,373	$88,607	$153,470	-35.2%	12.2%
Vancouver	$148,247	$109,986	$140,159	5.8%	34.8%
Victoria	$127,826	$95,070	$122,175	4.6%	34.5%
Average	$111,834	$86,313	$98,618	13.4%	29.6%

Notes: For each city-year the average house price is divided by unit size to give a per sq. meter price. The price per square meter is multiplied by 103 for all cities and years.

Source: Houses insured under National Housing Act, CMHC Annual Housing Statistics

Table 10
Comparing House Price Series: NHA vs MLS
House Prices & Mortgage Eligibility - 1990

CMA	House Prices NHA Existing	House Prices MLS Average	Pct Qualify for Mortg NHA Existing	Pct Qualify for Mortg MLS Average
Halifax	$91,437	$106,107	47.4%	42.4%
Quebec City	$77,007	$90,540	49.2%	38.2%
Montreal	$98,983	$122,168	37.0%	22.9%
Sherbrooke/Trois-Riveres	$75,152	$83,023	41.9%	34.2%
Ottawa-Hull	$114,310	$144,557	39.3%	20.7%
Oshawa	$171,659	$180,459	15.3%	12.0%
Toronto	$222,605	$269,971	5.8%	2.5%
Hamilton	$144,072	$180,860	16.6%	6.9%
St. Catherines/Niagara	$109,427	$139,508	25.9%	11.1%
Kitchener	$154,078	$174,286	11.5%	7.1%
London	$127,911	$147,227	21.4%	12.3%
Windsor	$92,592	$116,025	35.1%	18.1%
Sudbury/Thunder Bay	$94,574	$115,628	40.1%	26.5%
Winnipeg	$70,545	$89,196	46.8%	32.4%
Regina/Saskatoon	$66,113	$80,131	51.0%	42.1%
Calgary	$123,128	$140,203	30.3%	22.5%
Edmonton	$101,592	$110,256	36.9%	31.0%
Vancouver	$168,397	$247,034	15.7%	3.0%
Victoria	$140,112	$175,405	22.1%	9.8%

Notes: Renter families ages 25-44. If mortgage payments with 10% downpayment and property tax are less than 32 percent of income, the household can afford ownership. Prices are constant size price by CMA of existing units financed with NHA insured mortgages. Average* - calculated only for those CMAs identfied in the 1981 file.

Source: Canadian Census Public Use Micro-Sample , Family Files; MLS Annual Statistical Survey

Table 11
Percent of Renters Qualifying for Mortgage
Average Existing Unit 1991 - with Alternative Downpayments

CMA	5% Down	10% Down	20% Down	Change in Pct. of Renters Who Can Afford Mortgage 10% to 5%	10% to 20%
Halifax	44.0%	47.4%	54.6%	-3.4%	7.2%
Quebec City	46.0%	49.2%	56.9%	-3.3%	7.6%
Montreal	33.6%	37.0%	45.0%	-3.4%	8.0%
Sherbrooke/Trois-Riveres	37.2%	41.9%	48.9%	-4.7%	7.0%
Ottawa-Hull	34.7%	39.3%	47.5%	-4.6%	8.2%
Oshawa	11.6%	15.3%	21.3%	-3.7%	6.0%
Toronto	4.7%	5.8%	9.8%	-1.1%	4.0%
Hamilton	14.0%	16.6%	25.3%	-2.6%	8.7%
St. Catherines/Niagara	22.4%	25.9%	34.3%	-3.4%	8.4%
Kitchener	9.5%	11.5%	19.0%	-2.0%	7.5%
London	17.5%	21.4%	27.2%	-3.9%	5.8%
Windsor	29.4%	35.1%	41.5%	-5.7%	6.4%
Sudbury/Thunder Bay	37.2%	40.1%	47.2%	-3.0%	7.1%
Winnipeg	43.7%	46.8%	52.4%	-3.1%	5.6%
Regina/Saskatoon	49.0%	51.0%	57.2%	-2.0%	6.2%
Calgary	26.8%	30.3%	37.5%	-3.5%	7.2%
Edmonton	32.6%	36.9%	43.7%	-4.3%	6.8%
Vancouver	12.8%	15.7%	22.5%	-2.9%	6.7%
Victoria	18.5%	22.1%	31.3%	-3.5%	9.3%

Notes: Renter families ages 25-44. If mortgage payments with 5,10, or 20% downpayment and property tax are less than 32 percent of income, the household can afford ownership. Prices are constant size price by CMA of existing units financed with NHA insured mortgages.

Source: Canadian Census Public Use Micro-Sample , Family Files