



NEW HOMES AND RED TAPE:

Residential Land-Use Regulation in BC's Lower Mainland

Kenneth P. Green, Ian Herzog, and Josef Filipowicz



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Executive Summary

As an increasing number of Canadians move to major cities, housing prices have continued to rise. Understanding how public policy affects the supply of new homes is critical. Following several major studies in the United States on this topic, the Fraser Institute's survey of housing developers and homebuilders collects data about how residential land-use regulation affects the supply of new housing. The data collected reflect the experiences and opinions of industry professionals across Canada. *New Homes and Red Tape: Residential Land-Use Regulation in BC's Lower Mainland* is the first in a series tallying the data to represent industry professionals' experiences and opinions of how residential development is regulated in cities across Canada. This report presents survey results for cities in British Columbia's Lower Mainland.

Estimates of typical project approval timelines in Lower Mainland cities range from 5 months in Pitt Meadows and 8.5 months in New Westminster to 16.1 months in the District of North Vancouver and 17.7 months in West Vancouver, where timelines are also rated the most uncertain. Vancouver, of the 18 cities with sufficient survey responses, has the third-longest approval timelines (15.1 months); and of the 16 cities ranked for uncertainty, Vancouver ranks third from the bottom.

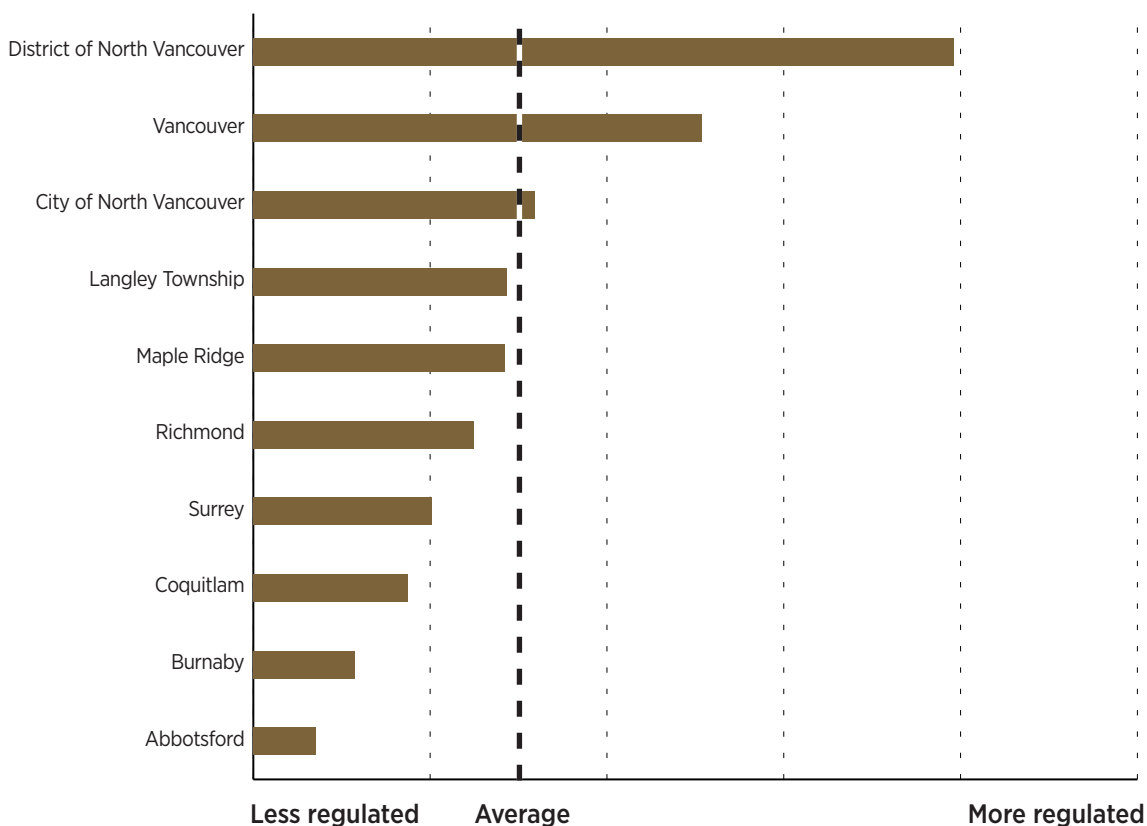
Reported compliance costs and fees add up to a low of \$14,357 per home built in Abbotsford and a high of \$40,000 per home in the District of North Vancouver. Analysis of national data shows no evidence that these differences systematically reflect higher infrastructure costs of accommodating low density growth. Instead, the data suggest that intensifying cities—those building up instead of out—often have regulatory frameworks that are costly to navigate.

The survey reports that zoning bylaws need to be changed to accommodate more than 80% of new residential development in eight of 19 cities. Estimates of rezoning's effect on approval timelines range from 2.8 additional months in Port Coquitlam to 13 in the District of North Vancouver.

Council and community opposition to residential development is perceived as strongest in cities where the value of dwellings is highest, raising questions about the causes and consequences of local resistance to new housing. The strongest opposition is reported in the District of North Vancouver, with Vancouver and the City of North Vancouver tied for second. This opposition is typically not perceived as a significant deterrent to building in Surrey, Coquitlam, and Burnaby.

The index of residential land-use regulation tallies the results of five key components of regulation’s impact—approval timelines, timeline uncertainty, regulatory costs and fees, rezoning prevalence, and impact from local council and community groups—in 10 cities that generated sufficient survey responses. This index ranks Abbotsford as the least regulated and the District of North Vancouver as the most. Vancouver, the Lower Mainland’s core, comes in above average in all categories except for the frequency of rezoning and is the second most regulated city ranked overall.

Composite Index of Residential Land-Use Regulation in ten cities in British Columbia’s Lower Mainland



1. Introduction

As an increasing number of Canadians move to major cities, housing prices have continued to rise. Understanding how public policy affects the supply of new homes is critical. Evidence of the importance of land constraints for determining differences in the supply of new housing, and price growth, across American housing markets is mounting (see Saiz, 2010 and Saks, 2008 for examples). Systematic comparisons of land-use regulations across Canadian cities can help identify where they are cost-effective and efficient, and where these regulations burden local economies and aspiring home-owners.

The Lower Mainland encompasses the Vancouver, Abbotsford-Mission, and Chilliwack metropolitan areas, and was home to 58.5% of British Columbia's population as of the 2011 census. This region, bounded to the north by mountains, to the west by the Pacific Ocean, and to the south by the border with the United States, faces unique geographical obstacles to growth. Greater Vancouver's housing market has seen prices rise by 68% between January 2005 and January 2015 (MLS, 2015) while consumer prices rose by only 14% (Statistics Canada, 2015).

The Fraser Institute has conducted a survey of housing developers and home-builders to assess how residential land-use regulation affects the supply of new housing. The data collected represent the experiences and opinions of industry professionals across Canada. This report presents survey results for cities in British Columbia's Lower Mainland describing the length and uncertainty of approval timelines for residential development projects, compliance costs and fees, how frequently respondents must rezone property, and how they gauge local and political opposition to their projects.

The Fraser Institute's Survey of Land-Use Regulation continues work done in the United States, developing insights into policy outcomes in Canadian cities. Recent US work that inspired this survey includes that of Gyourko, Saiz, and Summers (2008) who conducted a nationwide survey measuring these regulatory processes and their outcomes. Another series of surveys was used to understand land-use regulation in the San Francisco Bay Area, incorporating perspectives of city officials and residential developers (Calfee et al., 2007; Quigley, Raphael, and Rosenthal, 2008). For a more in-depth exploration of research into regulation's economic impacts, see Appendix 1 (p. 23).

2. Data

2.1 Survey questionnaire

The Fraser Institute's Survey of Residential Land-Use Regulation was designed to capture key insights into residential development and building professionals' experiences with land-use regulation. Its design is an extension of work by Calfee et al. (2007). Their survey was meant to support data from city planning officials. We have modified their methods to form a stand-alone survey of residential developers and home builders describing land-use regulation. Respondents were directed to focus on municipalities and types of residential development with which they were familiar, giving accounts of:

- the typical length and uncertainty of approval timelines;
- typical regulatory compliance costs and fees;
- the role of politicians and community groups in residential development;
- the effects of zoning bylaws and official plans.

Responses were measured on scales that reflect directly measurable outcomes where possible (months, dollars, or proportion of projects affected), and clearly labeled 5-point scales otherwise. We distinguish single-family, clearly defined as single detached homes, from multiple dwelling developments, which we specify as including townhouse, semi-detached, and apartment units,¹ consistent with the definition of the Canada Mortgage and Housing Corporation (CMHC, 2014). The survey was administered electronically and distributed through developer and homebuilder trade associations. For a list of survey questions, see Appendix 6 (p. 35).

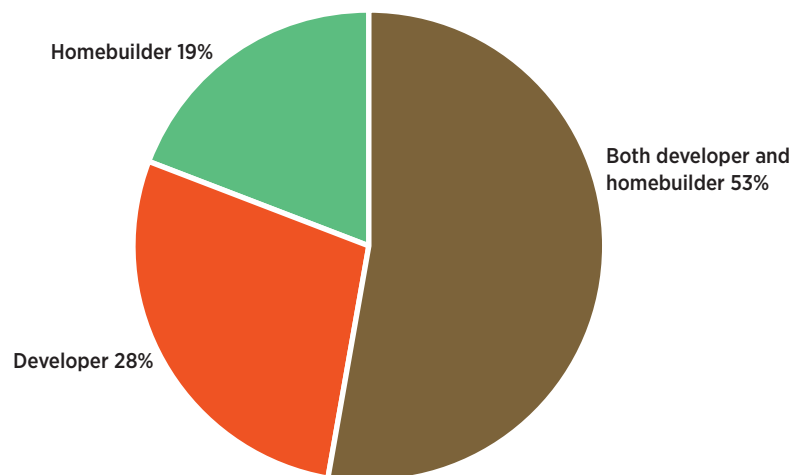
2.2 Survey response and the sample

The survey was conducted in the Fall of 2014, and distributed primarily through industry associations. The regulatory data used in this report were obtained from 43 respondents in the Lower Mainland. The average respondent answered questions for 4.77 cities. Although respondents' identities are not known, their answers generated a range of results that is similar to other reports on the residential

1. High-rise condominiums are included in the category of multiple dwelling developments.

development process in the Lower Mainland.² **Figure 1** illustrates that the majority of survey respondents identified themselves as either developers and homebuilders, or solely developers.³ **Figure 2** shows that only 12% of respondents specialize in detached homes in the Lower Mainland. Over 70% of respondents who have worked on a single-family project in the past 10 years also produce multiple dwelling developments.

Figure 1: Respondents from the Lower Mainland to the Survey of Residential Land-Use Regulation, by profession (%)



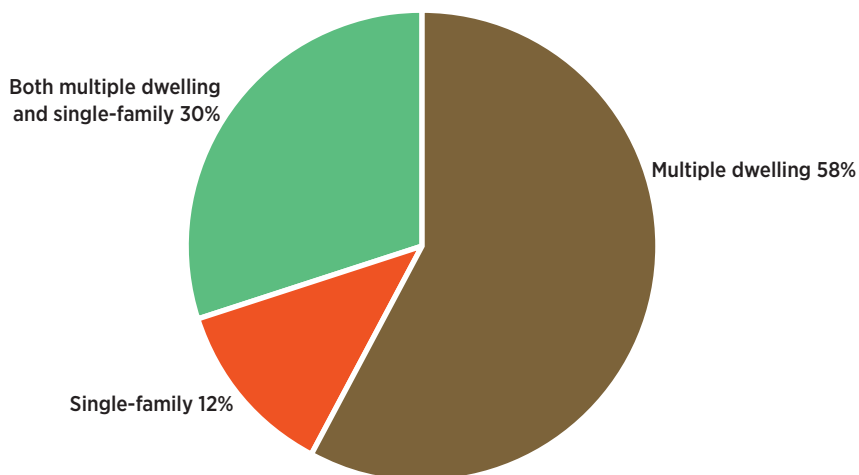
Note: Homebuilder or developer refers to a respondent who falls in one category but not the other. Many firms do several related types of work, but these two broad categories are useful for understanding the industry.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

2. The 2014 *Getting to Groundbreaking* (G2G) report by Simon Fraser University and a number of real-estate industry associations and municipal partners produced a similar range of per-unit costs (approximately \$10,000 to \$40,000) and average approval timelines (approximately 5 months to 20 months). However, our results are not directly comparable to G2G as we collect less detailed, but nationally comparable, data while the most recent G2G release focuses on townhouse development in the Lower Mainland (a subset of our multiple dwelling category).

3. The terms “developer” and “homebuilder” are not universally defined and share a degree of overlap. However, they are considered distinct professions by the Canadian Home Builders’ Association (2011), and the Building Industry and Land Development Association, among others. In general, homebuilders are primarily concerned with the construction of new housing, but may also include renovators and contractors. Developers are primarily responsible for the servicing and subdivision of land. Many firms fill both of these roles.

Figure 2: Respondents from the Lower Mainland to the Survey of Residential Land-Use Regulation, by type of development (%)



Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

This report presents several measures of regulation based on the survey data. We do not report results for categories based on fewer than three responses, and we indicate where they are based on fewer than five. The number of cities presented in each section of our analysis varies alongside the number of responses to each question in our survey.

Without knowing the market shares of companies responding to the survey it is difficult to calculate a meaningful response rate. For example, if one developer represents 60% of new homebuilding in one city, that developer's response is arguably more significant than all other responses from that city combined.⁴ Our survey does not account for scale.

Table 1 reports characteristics of cities described in this report; all data are from 2011, the most recent census year. Vancouver is the most populous city listed despite several of its suburbs occupying more land. With single detached dwellings representing only 18% of the city's occupied stock, Vancouver is densely settled relative to the nearby District of North Vancouver and has characteristics similar to those of suburbs such as the City of North Vancouver and New Westminister.

The City of Vancouver was the most popular commuting destination for the first seven cities listed in table 1. Despite differences in reported dwelling values and

4. Conversely, one can speculate that it may be difficult for a new developer or homebuilder to compete successfully against incumbents, who know the nuances of each city's regulatory process. If this is true, more highly regulated cities would have fewer developers (each with a large market share) and the experiences of smaller firms are important.

Table 1: City characteristics as of the 2011 census

	Population	Land Area (km ²)	Single detached dwellings (%) ¹	Median dwelling value (\$) ²	Median commute time (min.) ³	Most common place of work and percentage of commuters
Vancouver	603,502	115	18%	\$752,016	21	Vancouver
Burnaby	223,218	91	25%	\$600,941	30	
District of North Vancouver	84,412	161	56%	\$850,744	21	
New Westminster	65,976	16	18%	\$400,729	30	
City of North Vancouver	48,196	12	15%	\$599,985	21	
West Vancouver	42,694	87	58%	\$1,299,894	21	
Port Moody	32,975	26	32%	\$539,932	31	
Surrey	468,251	316	42%	\$500,746	30	Surrey
Langley City	25,081	10	25%	\$300,696	23	
White Rock	19,339	5	29%	\$450,494	26	
Maple Ridge	76,052	267	59%	\$449,365	31	Maple Ridge
Pitt Meadows	17,736	87	46%	\$459,965	30	
Richmond	190,473	129	37%	\$601,945	21	Within city
Port Coquitlam	56,342	29	42%	\$489,678	31	
Mission	36,426	226	69%	\$399,607	26	
Langley Township	104,177	308	59%	\$501,361	25	
Delta	99,863	180	64%	\$562,181	26	
Coquitlam	126,456	122	44%	\$599,465	30	
Chilliwack	77,936	262	59%	\$341,274	16	
Abbotsford	133,497	376	44%	\$393,600	16	

Notes: **1.** Percentage of occupied private dwellings. The census defines single detached dwellings as those with open space on all sides, and no dwellings either above or below. **2.** Dwelling values refer dollar amount (in CA\$2011) expected by the owner if the dwelling were to be sold. Reported for owner-occupied, non-farm dwellings. **3.** Minutes. Commute times refer to how many minutes it took for a person to travel from home to work. Reported for individuals age 15 years and older in private households who worked at some time between January 1, 2010 and May, 2011. Typically refers to place of employment and residence at the time of the survey.

Sources: Statistics Canada, 2013a, 2013b, 2012; authors' calculations.

form, it is useful to think of these cities as common homes for those working in the region's core. However useful, there are caveats to this interpretation. For example, over half of Richmond commuters work locally but the city can still be considered home for many who commute to Vancouver, the usual place of work for 27% of Richmond commuters. Commuting trends suggest that Chilliwack and Abbotsford, whose commuters tend to work locally, are relatively isolated from Vancouver's core; this is reflected in the comparatively low value of dwellings in these areas.

3. Survey Results

3.1 Approval timelines

Survey respondents were asked to estimate approval timelines for standard single-family and multiple dwelling projects that do and do not require rezoning (a process described in section 3.3). Between one and four timeline entries per city are recorded for each respondent, depending on the types of work that they do in each city. For each type of work, respondents were asked to select one of 7 ordered choices: 2 months or less, 3 to 6 months, 7 to 10 months, 11 to 14 months, 15 to 18 months, 19 to 23 months, and 24 months or more.

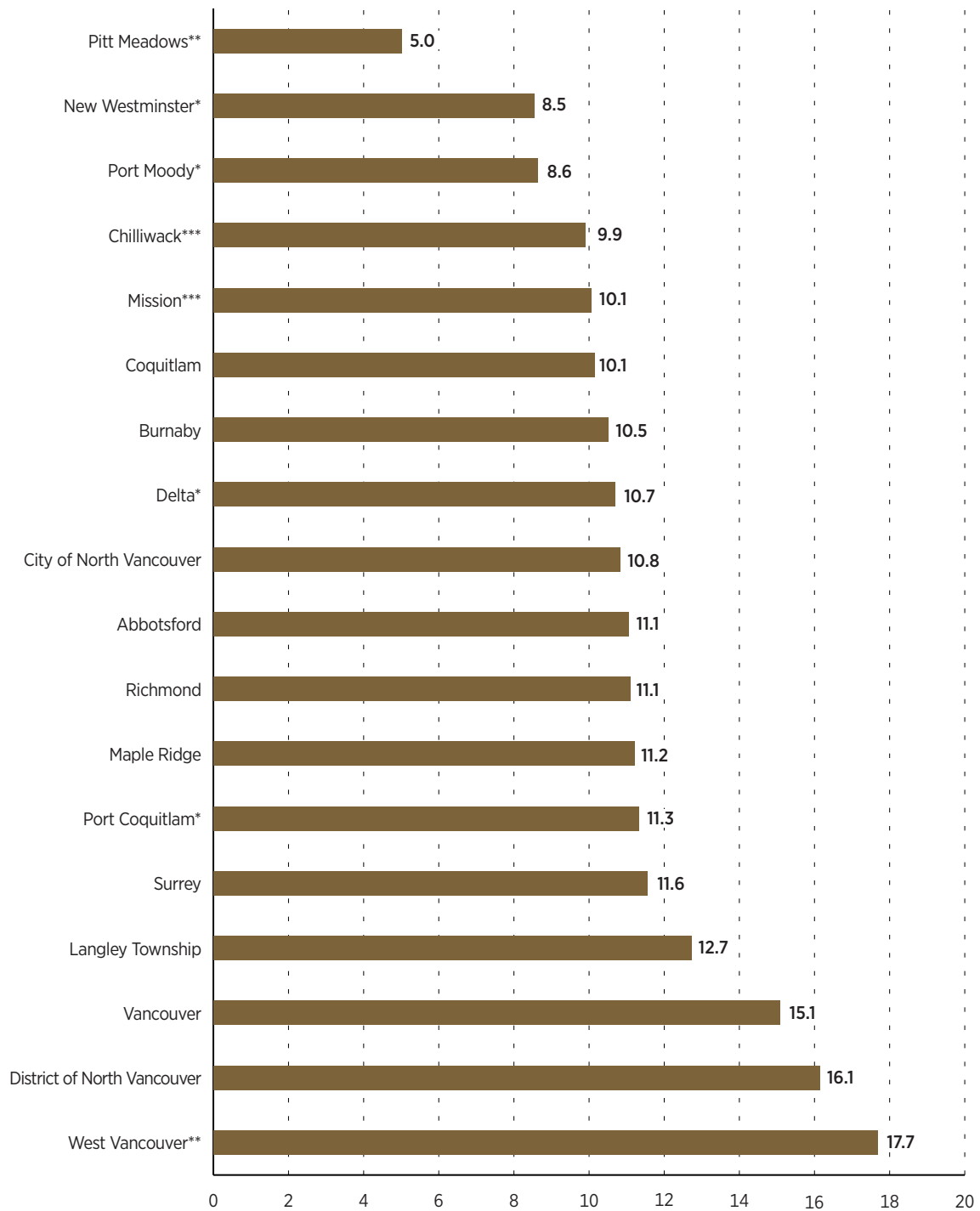
The Approval Timeline Index (ATI) is the city average of survey respondents' timeline estimates. To calculate this average, each bin was assigned its midpoint.⁵ Respondents that input a timeline of three or more years were omitted from the Approval Timeline Index. These high outliers all refer to timelines with rezoning, making up 2% of all timeline entries requiring rezoning.

Of the 18 cities represented in [figure 3](#), the majority share reported timelines in the range of 10 to 13 months. Large variations in these timelines occur between cities at the low end (Pitt Meadows, New Westminster, and Port Moody) and those at the high end (Vancouver, the District of North Vancouver, and West Vancouver) of the range. The difference between several of the region's western and northern suburbs, as well as the city of Vancouver itself represents the doubling (or tripling, when comparing Vancouver to Pitt Meadows) of reported approval timelines. Additional measures of approval timelines, broken down by housing type (single-family or multiple dwelling) and by projects requiring rezoning compared to those not requiring rezoning, are presented in Appendix 4 (p. 29).

The Approval Timeline Index is influenced by the type of project done by survey respondents, which varies across cities. For example, the ATI for Burnaby (which uses data from 18 unique respondents) is based almost entirely on accounts of multiple dwelling development, since only two of these respondents described the approval process for single-family development in this city. Likewise, the ATI for Richmond appropriately down-weights the importance of timelines for

5. Timelines in months were assigned to bins as follows: 2 months or less is taken as 1 month; 3 to 6 months is taken as 4.5 months; 7 to 10 months is taken as 8.5 months; 11 to 14 months is taken as 12.5 months; 15 to 18 months is taken as 16.5 months; 19 to 23 months is taken as 21 months; and 24 months or more is taken as 28 months unless the respondent opted to input a timeline estimate (which the survey encouraged, but was not always done).

Figure 3: The Approval Timeline Index for BC’s Lower Mainland—typical approval timeline, in months



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

projects not requiring rezoning, which were described by only 6 respondents, compared to 10 for projects requiring rezoning. The ATI is deliberately constructed this way, to represent the average approval timeline for typical housing developments in each city.

3.2 Timeline uncertainty

In addition to the average approval time for a project, developers may also take the variation in approval times into account when considering projects. To assess the effect of timeline uncertainty in each city, we asked developers how this uncertainty affects both multiple dwelling and single-family development in each city. Responses are measured on a 5-point scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development; [4] Strong deterrent to development; and, [5] Would not pursue development due to this factor. The Timeline Uncertainty Index is the average response to this question in each city (**figure 4**).

Uncertainty about timelines appears to be a relatively minor deterrent to development in many Lower Mainland municipalities. The two most notable exceptions to this generalization are West Vancouver, which approaches a 5 (Would not pursue development due to this factor), and Pitt Meadows, which is not only perceived as not deterring development, but verges on encouraging it.

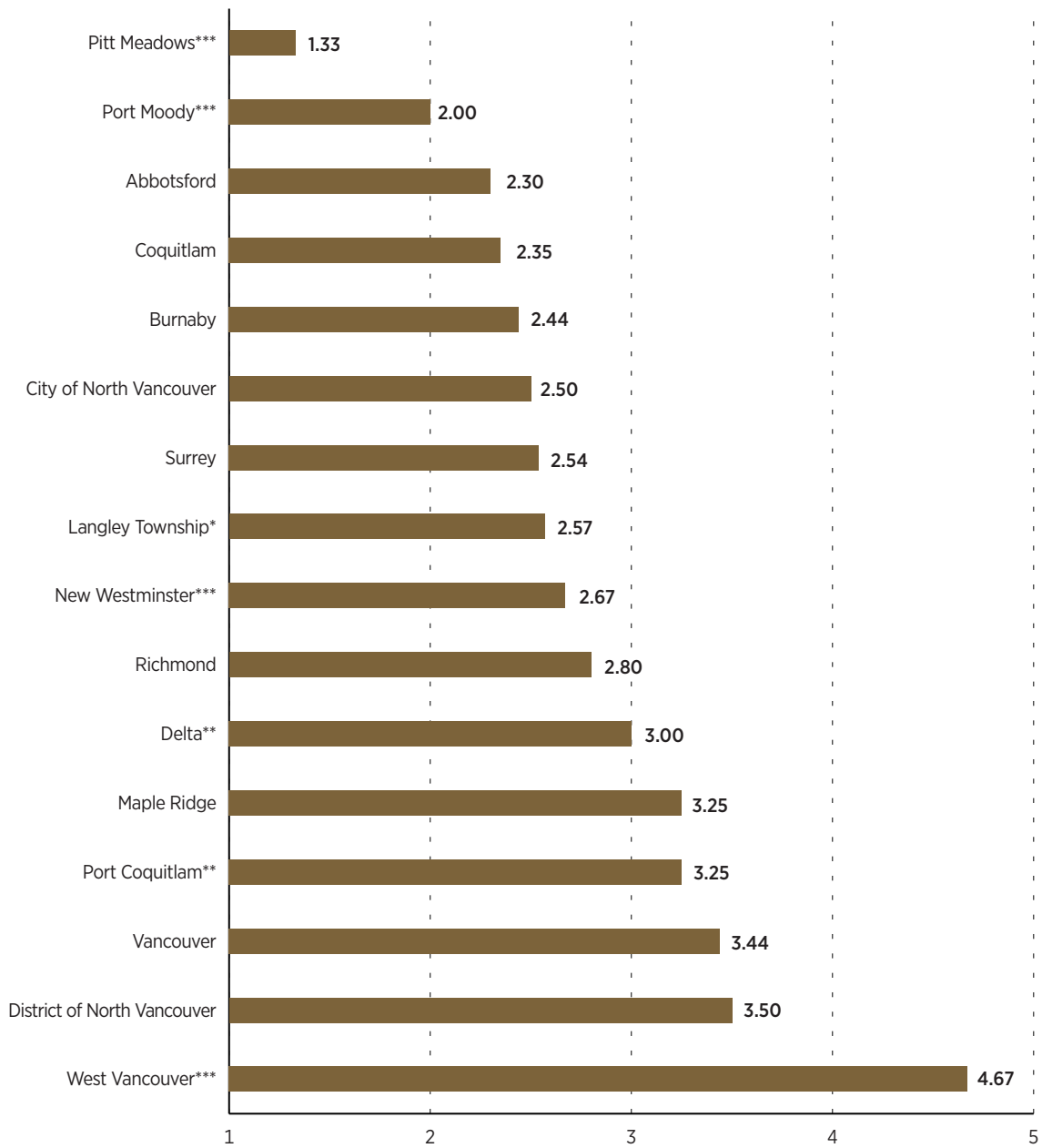
Approval timelines are an important component of established measures of residential land-use regulation (Gyourko, Saiz, and, Summers 2008; Quigley, Raphael, and Rosenthal, 2008). Long and uncertain approval timelines can make the supply of new housing less responsive to demand, with negative consequences for anyone looking to enter the market (see Appendix 1, p. 23 for a more detailed discussion).

3.3 Compliance costs and fees

We asked respondents to estimate the sum of regulatory compliance costs and fees accrued per dwelling unit built for standard single-family and multiple dwelling projects.⁶ The survey offered 7 ordered choices: Less than \$1,000 per unit; \$1,000 to \$9,999 per unit; \$10,000 to \$19,999 per unit; \$20,000 to \$34,999 per unit; \$35,000 to \$49,999 per unit; \$50,000 to \$75,000 per unit; and more than \$75,000 per unit. Respondents had the option to specify a cost if they selected the highest bin, but this option was not exercised in the Lower Mainland.

6. Specifically, we asked for estimates of the cost (per dwelling unit) of the project approval and regulatory compliance process in each city. The survey specified that this includes all administration, processing, and direct compliance costs. Appendix 6 (p. 35) presents the exact wording of the survey questionnaire.

Figure 4: The Timeline Uncertainty Index for development in BC's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development; [4] Strong deterrent to development; and, [5] Would not pursue development due to this factor.

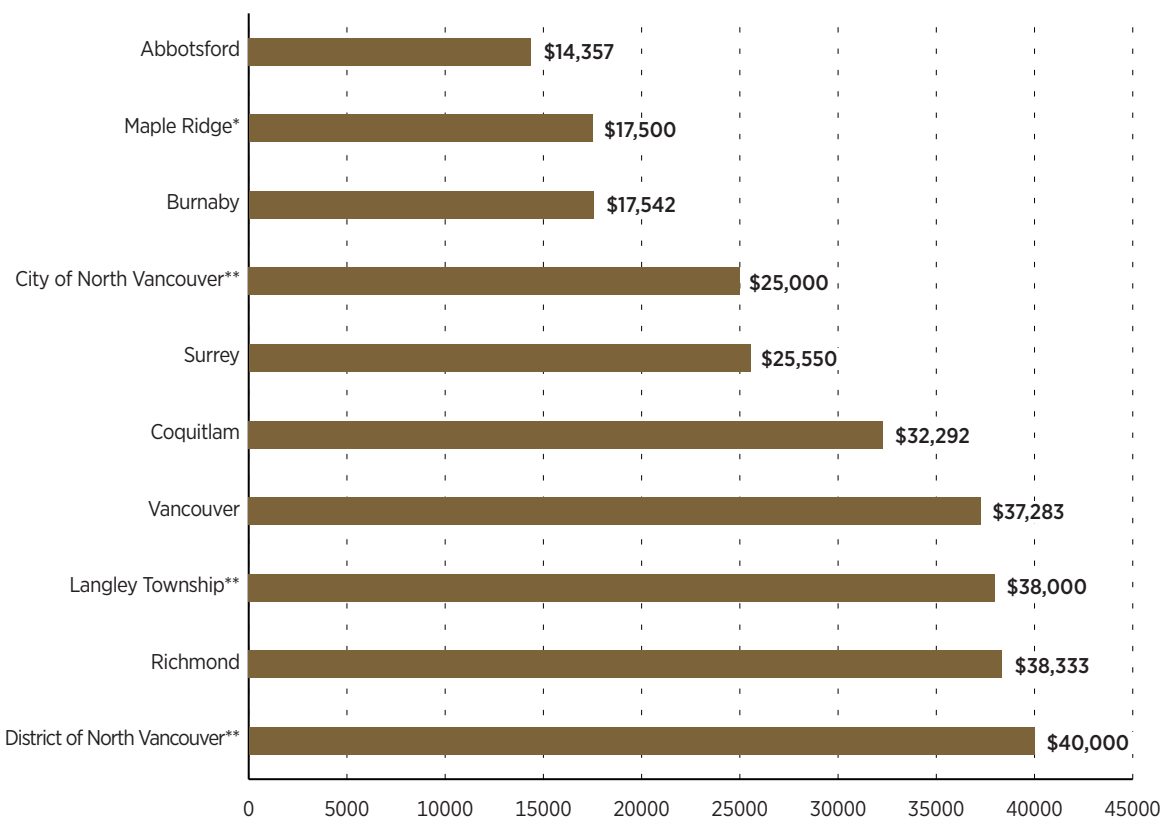
Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

The Cost and Fees Index (CFI) is the city average of survey respondents’ compliance costs and fee estimates. To calculate this average, each bin was assigned its midpoint,⁷ except the top bin, which was assigned \$82,500.

Figure 5 shows CFI ratings in the 10 Lower Mainland municipalities where we have enough data to reliably measure regulatory costs of residential development. Abbotsford, Maple Ridge, and Burnaby all fall in the range of \$10,000 to \$20,000 per dwelling. It is interesting that Burnaby, which is adjacent to Vancouver, and Maple Ridge, an hour’s drive from the region’s core, share such similar CFI ratings.

At the opposite end of the CFI are the District of North Vancouver, Richmond, and Langley Township, a diverse trio of cities (as observed in table 1) with reported

Figure 5: The Cost and Fees Index for BC’s Lower Mainland—typical regulatory cost, \$ per dwelling unit



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors’ calculations.

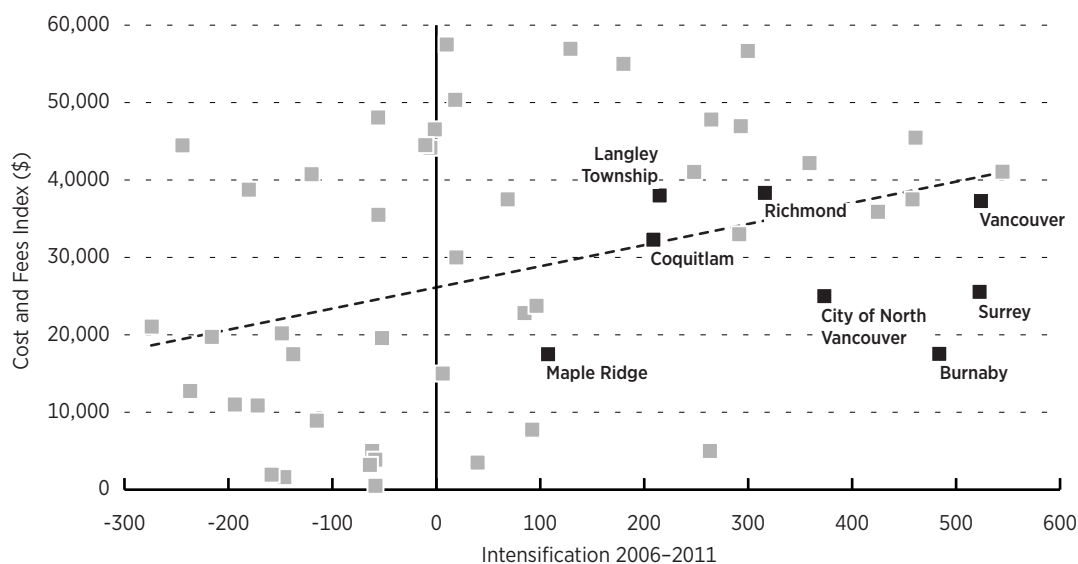
7. Costs and fees in dollars per dwelling unit built were assigned to bins as follows: Less than \$1,000 per unit is taken as \$500; \$1,000 to \$9,999 per unit is taken as \$5,000; \$10,000 to \$19,999 per unit is taken as \$15,000; \$20,000 to \$34,999 per unit is taken as \$27,500; \$35,000 to \$49,999 per unit is taken as \$42,500; \$50,000 to \$75,000 per unit is taken as \$62,500; and More than \$75,000 per unit is taken as \$82,500.

compliance costs reaching a high of \$40,000 per new dwelling. Although the CFI clearly indicates the intermunicipal variation of reported compliance costs and fees on residential development, what is less clear is the level of regulatory costs appropriate to help pay for the infrastructure and amenities required to service new housing.

Servicing residential development can be subject to increasing returns to scale. Dense, inner-city development should generally be cheaper to service on a per-dwelling basis than homes built in new neighbourhoods (see Slack, 2002 for a discussion in the Canadian context). If regulatory costs largely represent the capital cost of servicing new neighbourhoods with new roads, sewers, and other infrastructure, they should be lowest in cities that are intensifying—growing by making existing communities denser rather than creating new ones on greenfield land. To investigate this possibility, we use census data to measure the scale of intensification from 2006 to 2011 in Canadian cities (see Appendix 3, p. 27 for details) and assess its correlation with the CFI.

Figure 6 shows the national relationship between our measures of regulatory costs and intensification, which exhibit a weak, positive, correlation (with

Figure 6: Cost and Fees Index (\$) and intercensal intensification across Canada, 2006–2011



Notes: **1.** Black markers indicate cities in the Lower Mainland; grey markers indicate cities where CFI data are preliminary. **2.** The correlation coefficient between the CFI and intensification is 0.365. **3.** Cities to the left of the vertical dotted line effectively became less dense between 2006 and 2011. **4.** Intensification is measured as the change in weighted average density (effective living density). See Appendix A.2 for details. **5.** District of North Vancouver and Mississauga were high outliers and removed (Intensification >1000). **6.** Cities with geographic boundary changes between censuses that result in a change in land area of 2.5% or more are omitted.

Sources: Statistics Canada 2011, 2006; Fraser Institute Survey of Land-Use Regulation, authors' calculations.

a correlation coefficient of 0.365).⁸ Cities with negative intensification were effectively less dense in 2011 than they were five years earlier, seeing the bulk of growth in new, low density neighbourhoods; low CFI ratings are concentrated in these cities. Burnaby is the only city in the top quarter of the intensification scale with a cost and fees index below \$20,000, yet a quarter of cities observed have CFI ratings at or below \$15,000. These trends are the opposite of what one would expect if the CFI measures reasonable servicing costs. Instead, the data suggest that intensifying cities often have regulatory frameworks that are costly to navigate.

3.4 Rezoning

The need to change zoning bylaws can affect approval timelines and regulatory costs. Zoning bylaws “[state] exactly: how land may be used; where buildings and other structures can be located; the types of buildings that are permitted and how they may be used; [and] the lot sizes and dimensions, parking requirements, building heights and setbacks from the street” (Ontario, Ministry of Municipal Affairs and Housing, 2010).⁹ It is difficult to accurately measure the impact of zoning on the housing supply; we cannot observe how a city would grow without its current regulation. The prevalence of rezoning (the process of amending the zoning designation assigned to a given parcel) is our most objective measure of zoning’s impact on development.¹⁰

Our survey asked respondents whether they rezone property. Those who do were asked to estimate how frequently their multiple dwelling and single-family projects require rezoning in each city by selecting one of five bins: Never;

8. The OLS regression line shown has a slope indicating a \$27.03 increase in average CFI ratings for a one-point increase in intensification. Assuming homoscedasticity—which is not rejected by a Breusch-Pagan (1979) test (P-value = 0.3714)—the 95% confidence interval (CI) for this slope runs from 7.63 to 46.43. The strength of this positive relationship appears to come from variation between provinces (the data shown span Quebec, Ontario, Alberta, and British Columbia). Adding province dummy variables attenuates the OLS slope to indicate a \$3.05 change in the CFI per point change in intensification, statistically indistinguishable from zero (95% CI: -9.59 to 15.65). No specification tested provides systematic evidence of a negative correlation between intensification and the CFI across Canada.

9. This definition was selected for its brevity and its broad applicability. For a more detailed definition of zoning, as practised in British Columbia, see British Columbia, Ministry of Community, Sport & Cultural Development, 2015.

10. Conceptually, the prevalence of rezoning measures how compatible land-use regulation is with demand by counting the proportion of building done by survey respondents that requires amendment to existing zoning regulation. This measure does not capture zoning’s ability to prevent externalities; it indicates the amount of land with zoning regulation that developers and city planners have agreed to change.

Rarely (about 25% of projects); Sometimes (about half of projects); Frequently (about 75% of projects); and Always. The Rezoning Index is the average percentage of respondents' projects estimated to require rezoning in each city.¹¹ It is reported in **figure 7** and broken down by development type where possible in Appendix 5 (p. 33).

According to survey evidence, the overwhelming majority of residential development in the Lower Mainland requires rezoning. Our survey also suggests that only a third of projects in Pitt Meadows require rezoning, and even fewer in Chilliwack. Almost all reported projects in the District of North Vancouver require this approval. For the average Lower Mainland respondent, 72% of development requires rezoning,¹² far above the average of 58% in the rest of Canada.¹³

The added complexity of the rezoning process can potentially increase project approval timelines. Survey respondents who describe approval timelines both with and without rezoning allow us to estimate the average effect of the rezoning process on approval timelines. We do this by calculating the differences in these timelines for each respondent in each city, then averaging across responses.¹⁴ Preliminary data from across Canada suggest that for the average developer outside of the Lower Mainland, rezoning adds 4.58 months to a typical project's approval timeline.¹⁵ In the Lower Mainland, this average rises to 5.25 months, increasing the incentive to avoid rezoning.¹⁶

Figure 8 presents the estimated effect of each city's rezoning process on the time needed to approve standard residential developments. The District of North Vancouver and Langley Township both add over eight months to approval timelines alongside the rezoning process. This effect is accentuated in the District of

11. To compute the rezoning index, survey responses were coded as follows: never or indicated that respondent does not rezone land is taken as 0; rarely (about 25% of projects) is taken as 25%, sometimes (about half of projects) is taken as 50%, frequently (about 75% of projects) is taken as 75%, and always is taken as 100%.

12. This average is calculated across all responses in the Lower Mainland (not across cities), and includes responses for cities not listed in figure 7.

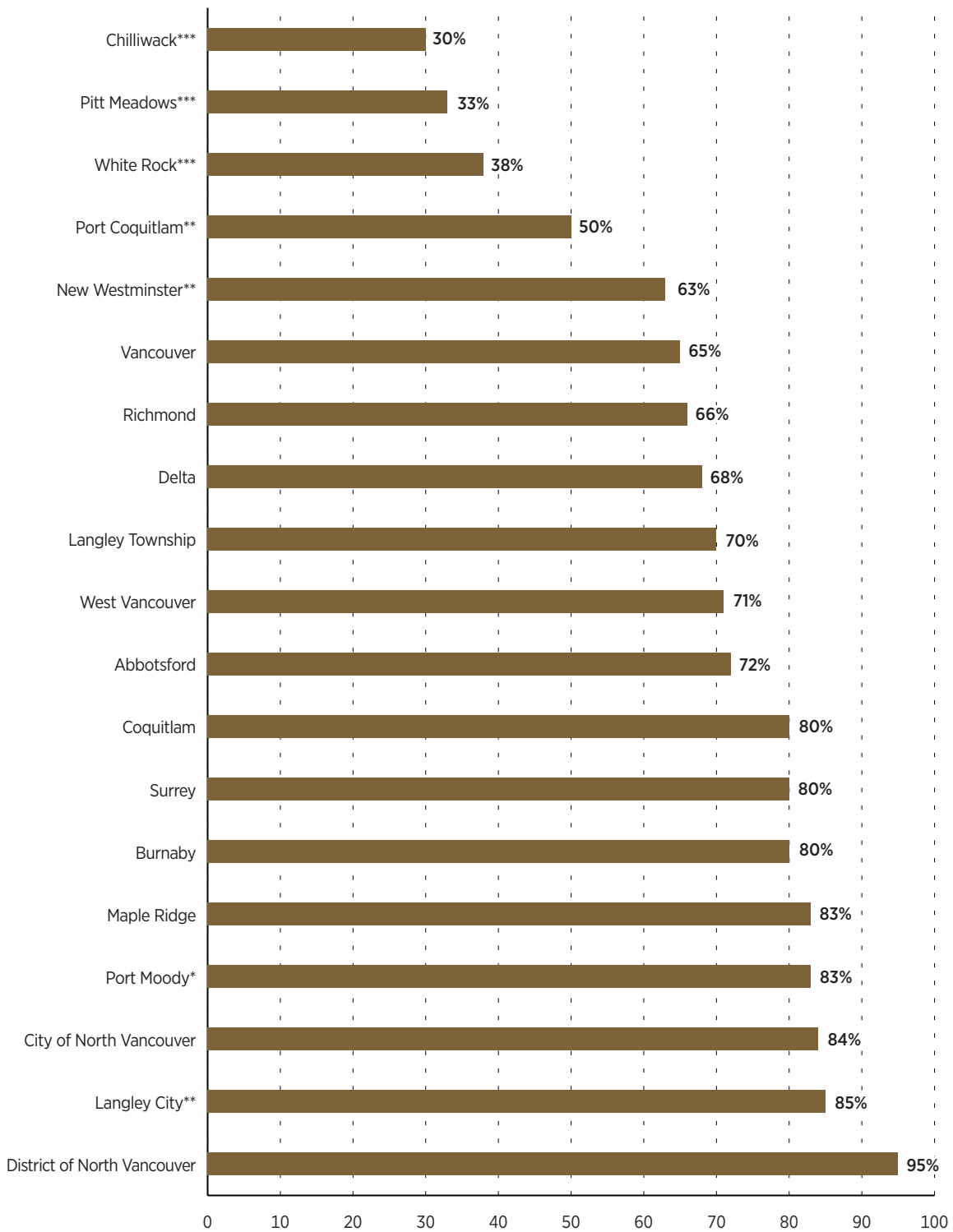
13. This figure increases to 60% of development if the Lower Mainland is included. Rezoning Index ratings outside of the Lower Mainland are preliminary.

14. Differences between timelines with and without rezoning are calculated for every survey respondent in each city, separately for single-family and multiple dwelling developments. Data from surveys without a response for either rezoning or non-rezoning timelines for a particular dwelling type and city are dropped. This statistic is only reported in cities where at least three respondents describe timelines with and without rezoning for either dwelling type.

15. The national average effect of rezoning on approval timelines is 4.74 months when the Lower Mainland is included.

16. These averages were computed across individual responses, not across cities. Averaging across the cities shown in figure 8 will produce different results.

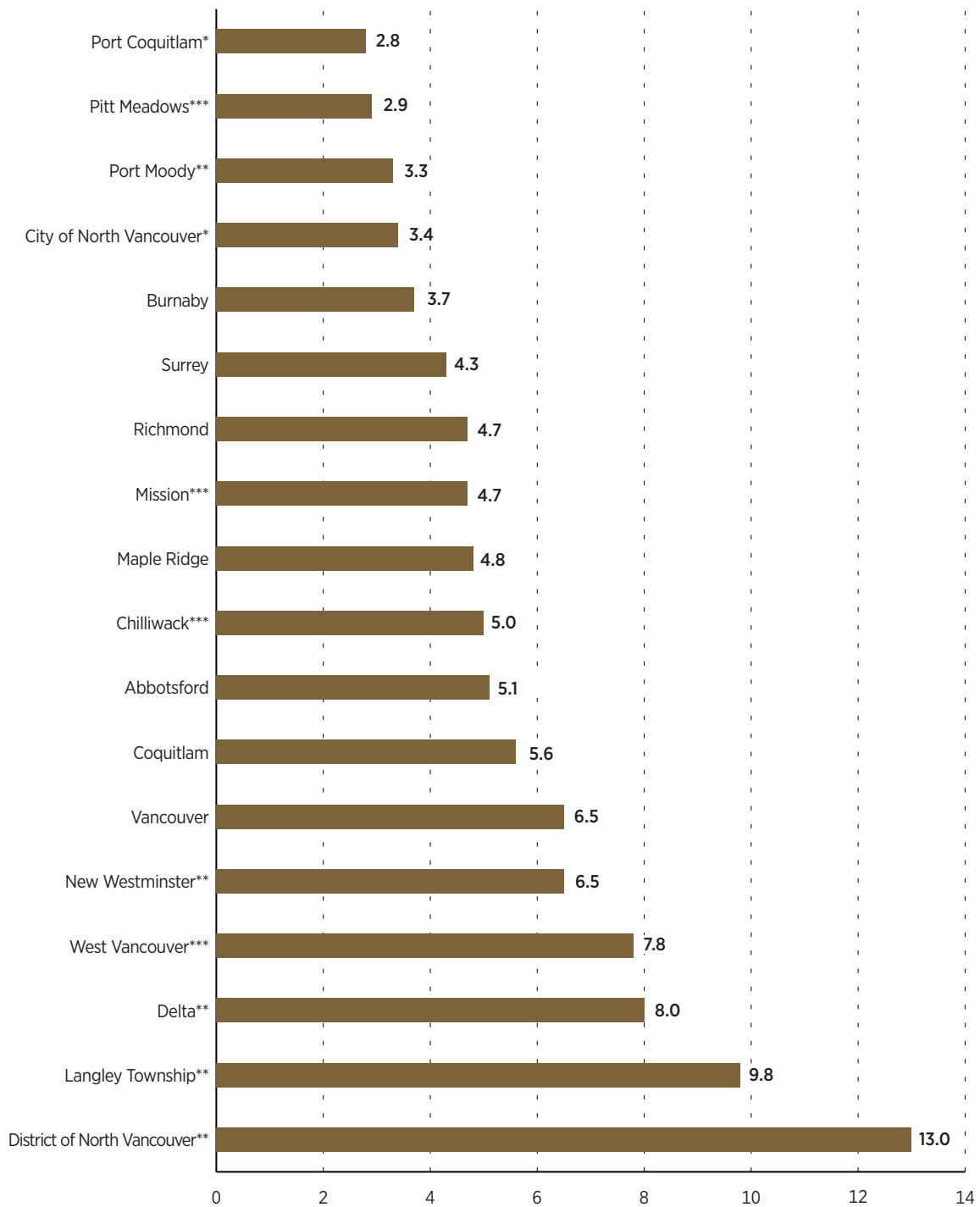
Figure 7: The Rezoning Index for BC's Lower Mainland—percentage of residential development requiring rezoning



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

Figure 8: The effect of the rezoning process on approval timelines in BC's Lower Mainland, city-level averages in months



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

North Vancouver by a high incidence of rezoning, which according to our survey affects 95% of development, compared to Langley Township's 70%. Respondents in Pitt Meadows report being able to avoid rezoning, with survey data from this city suggesting that only a third of new development is rezoned and that this process adds less than three months to approval timelines on average. A similar outcome is suggested in Port Coquitlam.

3.5 Council and community

We asked developers how local council and community groups affect single-family and multiple dwelling development. Responses are measured on a 5-point scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development; [4] Strong deterrent to development; and [5] Would not pursue development due to this factor. The Council and Community Index (CCI) is the average response to these questions for each city ([figure 9](#)).

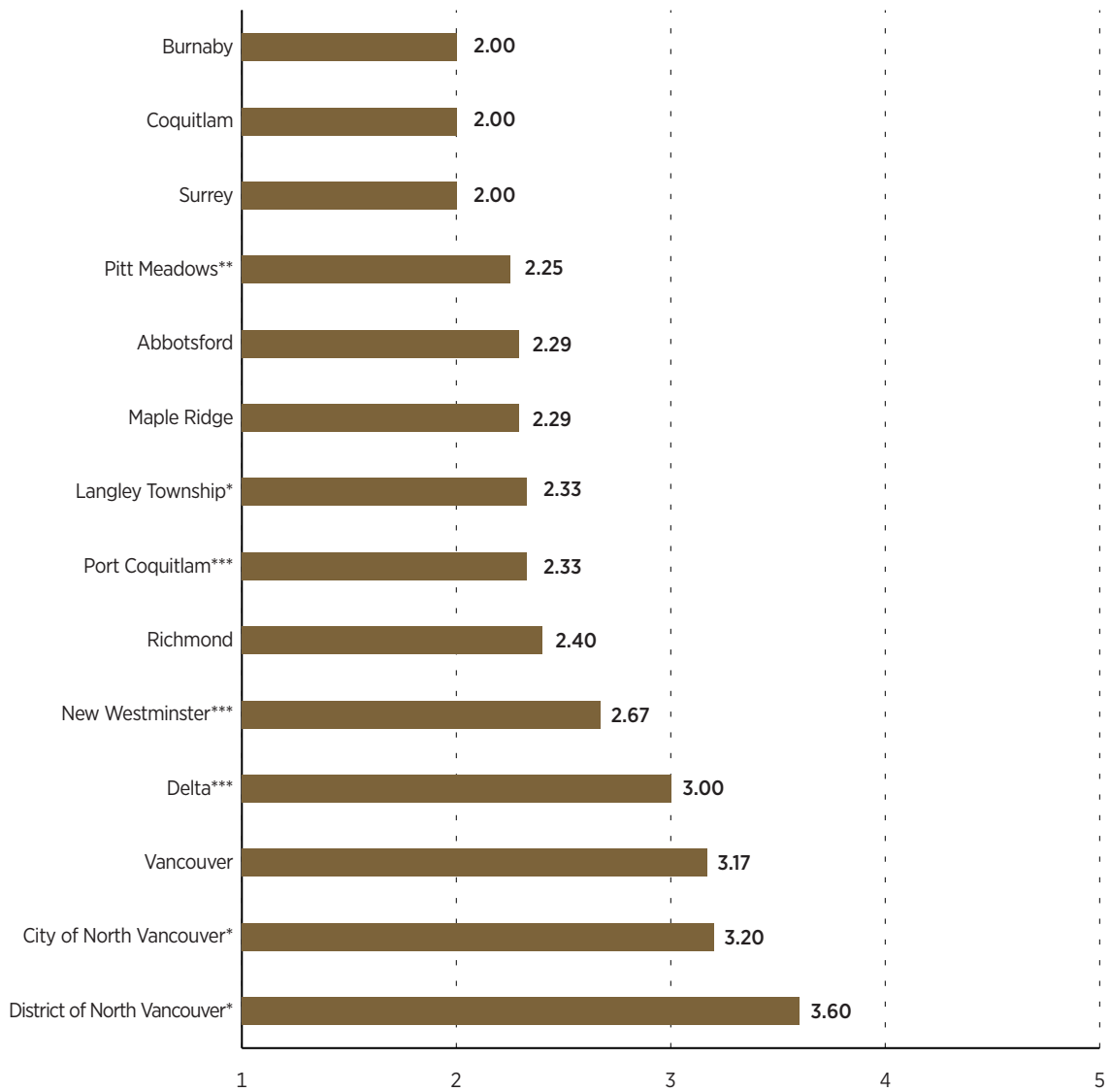
The strongest council and community opposition to new housing projects is concentrated in the City of Vancouver and the North Shore (the City and District of North Vancouver), while the eastern suburbs of Surrey, Coquitlam, and Burnaby have the least of this sort of opposition. In general, our survey suggests that council and community opposition presents a deterrent to development in only a handful of Lower Mainland cities. On the other hand, on average, no city shows a tendency to encourage development.

Some suggest that incumbent homeowners have an incentive to block new development, restricting the housing supply and increasing the market value of their property. Hilber and Robert-Nicoud (2013) formalize this argument, predicting that owners of developed land will favour stringent land-use regulation. Turning to data gathered from American metropolitan areas, the authors find a positive relationship between the share of developed land in 1992 and a measure of regulation in 2005; this evidence for their theory is supported by several statistical techniques.¹⁷ To the extent that this effect also occurs in Canada, it can be measured by the CCI.

[Figure 10](#) shows that the CCI is positively correlated with dwelling values reported to the *2011 National Household Survey* (with a correlation coefficient

17. Hilber and Robert-Nicoud (2013) estimate the effect of historical share of developed land and homeownership rate on current measures of regulation by two-stage least squares, using coastal access and the percentage of households with married couples and no children as instruments. In addition to a strong effect of developed land on regulation, Hilber and Robert-Nicoud find mixed evidence that past homeownership rates have led to more intense land-use regulation in the United States. The authors also control for household wages, population density, the Democratic Party's vote share, and regional effects.

Figure 9: The Council and Community Index for BC's Lower Mainland

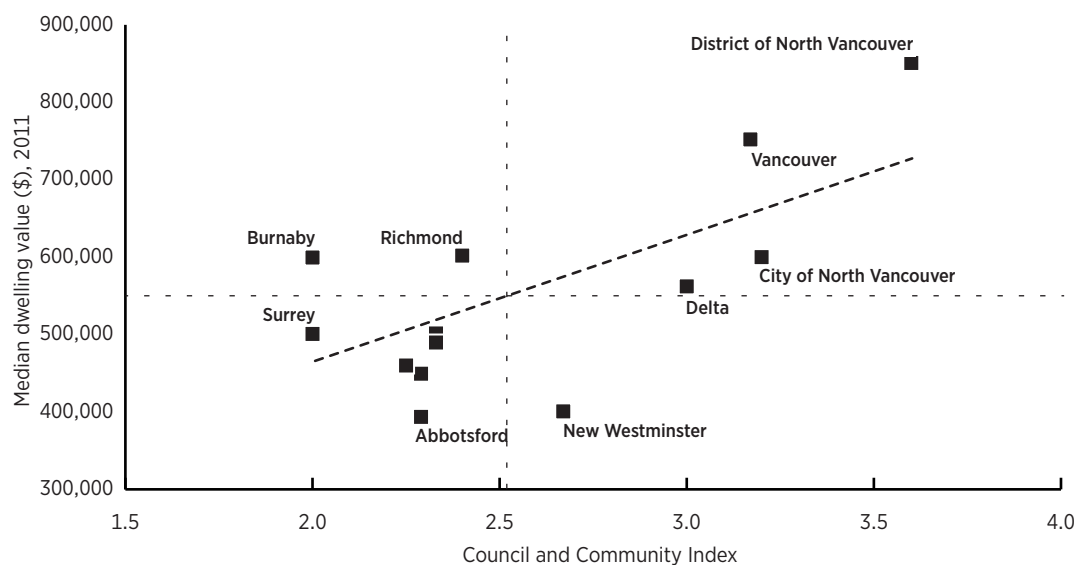


Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Scale: [1] Encourages development; [2] Not a deterrent to development; [3] Mild deterrent to development; [4] Strong deterrent to development; and, [5] Would not pursue development due to this factor.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

Figure 10: Council and Community Index and dwelling values in the Lower Mainland, 2011



Notes: **1.** The correlation coefficient between the CCI and city level median dwelling values is 0.639 and the trend line is fit by ordinary least squares. **2.** The vertical and horizontal dotted lines indicate the mean values of each axis.

Sources: Statistics Canada 2013a; Fraser Institute Survey of Land-Use Regulation, authors' calculations.

of 0.639).¹⁸ While this relationship is not necessarily causal—other factors such as the attractiveness of a neighbourhood may be driving both the CCI and dwelling values—it is difficult to rule out the hypothesis that homeowners may deter residential development to increase their property values.

In a similar fashion to the question on council and community opposition, we asked developers to gauge the impact of official city-planning objectives and zoning bylaws on residential development. As shown in Appendix 2 (p. 25), the results gathered for the Lower Mainland were almost perfectly correlated with the CCI and will not be discussed here.

18. The OLS regression line shown has a slope indicating an increase of \$161,049 in dwelling values ratings for a one-point increase in the CCI. Assuming homoscedasticity—which is not rejected by a Breusch-Pagan (1979) test (P-value = 0.8224)—the 95% confidence interval (CI) for this slope runs from 38,964 to 283,133.

4. An Index of Residential Land-Use Regulation

In presenting results of the Survey of Residential Land-Use Regulation, we have described many important pathways through which regulation affects the Lower Mainland's housing market. It is useful to have a single measure of land-use regulation, summarizing all of these dimensions so, in this section, we present an Index of Residential Land-Use Regulation for the Lower Mainland as a summary statistic of regulation.

We use a common standardization technique to produce our index, which ranks cities by their relative performance on each dimension of regulation. Appendix 2 (p. 25) describes this process in detail. We compute the index of regulation for the 10 Lower Mainland cities with at least three survey responses behind each of its components. Thus, our ranking of cities is dependent on the availability of high-quality data for each city. Some cities come in below our quality standard for only one of the index's components, but are nonetheless omitted.

4.1 Results

Condensing our survey-based measures of regulation into a single index has the advantage of creating a data-driven method to rank cities from least to most regulated. The Index of Residential Land-Use Regulation is negative in cities that are less regulated than average and positive in the Lower Mainland's most regulated cities. It is presented alongside its component measures of regulation in [table 2](#).

Of the cities ranked, Abbotsford tops the Index of Residential Land-Use Regulation. This is driven by good ratings on timeline uncertainty, regulatory costs, and rezoning, despite moderate rankings on the council and community and approval timeline indices. The District of North Vancouver ranked the lowest, as it scored poorly on all measures.

The City of Vancouver has the second poorest score on the Index of Residential Land-Use Regulation. This outcome is not driven by any one measure in particular as Vancouver's high regulatory costs alone would not drive such a poor rating: Langley Township has similar costs, but is ranked close to the region's average, bringing shorter approval timelines and less impact from controversy.

Table 2: Index of Residential Land-Use Regulation

	Approval Timelines	Cost and Fees	Council and Community	Timeline Uncertainty	Rezoning Prevalence	Index
1. Abbotsford	11.1	\$14,357	2.3	2.3	72%	-1.15
2. Burnaby	10.5	\$17,542	2.0	2.4	80%	-0.92
3. Coquitlam	10.1	\$32,292	2.0	2.4	80%	-0.63
4. Surrey	11.6	\$25,550	2.0	2.5	80%	-0.49
5. Richmond	11.1	\$38,333	2.4	2.8	66%	-0.25
6. Maple Ridge	11.2	\$17,500	2.3	3.3	83%	-0.08
7. Langley Township	12.7	\$38,000	2.3	2.6	70%	-0.07
8. City of North Vancouver	10.8	\$25,000	3.2	2.5	84%	0.09
9. Vancouver	15.1	\$37,283	3.2	3.4	65%	1.03
10. District of North Vancouver	16.1	\$40,000	3.6	3.5	95%	2.46
Cross-City Average	12.0	\$28,586	2.5	2.8	78%	

Note: The Index of Residential Land-Use Regulation is the standardized sum of its components, rescaled to have a standard deviation of one. It can be read as a Z-score.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

5. Professionals' Concerns and Policy Recommendations

Five respondents in the Lower Mainland provided comments beyond their answers to the survey's questions. The issues described include opposition by council, community, and city staff to development projects, as well as regulatory stringency, and timeline uncertainty or extension due to rezoning. These comments identify specific concerns surrounding land-use regulation in the Lower Mainland.

The most frequent issue to arise in comments is the Community Amenity Contribution (CAC) process. Unique to select British Columbian municipalities, CACs are developer contributions triggered when a site being developed requires rezoning. Unlike Development Cost Charges, which are commonly applied as a fixed cost per square foot, CACs are negotiated agreements aimed at funding off-site community amenities ranging from libraries to public art. In spite of provincial attempts to establish best practices for CACs, comments suggest that these charges can increase costs, and are often applied through a relatively opaque process.

There is concern and frustration with the consistency and efficiency with which regulations are applied in the Lower Mainland. One comment points to disagreement between city council and planning staff deterring development in some cities. Burnaby and Coquitlam, which have favourable survey results, are noted as having agreement between city council and planning staff, creating an incentive to build.

Local opposition was identified as a deterrent to development in several Lower Mainland communities. One comment uses the acronym "NIMBY", or *Not-In-My-Back-Yard*, a label describing "protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their neighbourhood" (Dear, 1992). Originally associated with opposition to public facilities like prisons and landfills, NIMBY attitudes sometimes challenge new homes or higher densities inserted into existing communities. One comment suggests that extensive provisions for community involvement in intensifying neighbourhoods can limit development, pointing out that the interests of a minority of residents sometimes take precedence over professional planning.

Finally, it is suggested that well-intentioned policies can increase the cost of housing in unexpected ways. One respondent makes the point that city planners tend to favour very specific types of mid-rise development. The respondent explains that these developments can be of worse value than high-rises, which have economies of scale, and less dense mid-rise, which they say can be built as inexpensive wood-frame buildings.

6. Conclusion

Our data show strong variability in how homebuilders and developers experience regulation across cities in British Columbia's Lower Mainland. We find that reported approval timelines, and how they are affected by the rezoning process, vary significantly across cities. We also find no evidence that low compliance costs and fees are most common in cities that are becoming more densely settled. This weak, yet positive, correlation we observe is inconsistent with the idea that costs and fees reflect increasing returns to scale in the delivery of municipal infrastructure and services. Council and community opposition to residential development is perceived as strongest in cities where dwelling values are highest, raising questions about the causes and consequences of local resistance to new housing.

Further work will analyse the results of the Survey of Residential Land-Use Regulation in major cities across Canada. The information produced will enable the systematic comparison of land-use regulation across municipalities, and can be used to understand regulation's consequences for housing markets and regional economies. It can play a role in identifying situations where regulation constitutes a burden on the housing market, and those where regulations are cost-effective and efficient. Continued measurement will help us understand the role of public policy in Canada's urban landscape.

Appendix 1. Evidence of Regulation's Economic Impacts

The study is part of a broader effort to understand the effects of land-use regulation on Canadian housing markets. This appendix outlines previous empirical studies that refine our understanding of the economic impact of these regulations, and motivate our work.

A number of empirical studies have found that the housing supply is less responsive to prices in the most regulated American markets (Mayer and Somerville 2000; Green, Malpezzi, and Mayo, 2005; Saks, 2008). Impact fees, which have merit when they offset property taxes or are invested in infrastructure (Burge, Nelson, and Matthews, 2007)¹⁷, have been associated with less affordable housing, capital gains to incumbent homeowners, and increased property taxes as values are reassessed over time (Evans-Cowley, Lockwood, Rutherford, and Springer, 2009). Saiz (2010) demonstrates the importance of geographic and regulatory land constraints in determining housing markets' ability to respond to demand, showing that the housing supply can be quite elastic in less constricted markets and the largest growth in housing prices has been concentrated in America's most constrained metropolitan areas.

Glaeser and Gyourko (2003) suggest that regulation taxes land, adding to the complexity of residential development and making buildable land scarcer. Their estimates of this regulatory tax are large, and vary significantly across cities. Further, using a cross section of major American cities, Glaeser and Gyourko (2003) found a positive correlation between the average time to approve rezoning requests and the market share of housing priced at 140% of construction costs.

In theory, the marginal cost of high-rise condominiums is decided by the cost of adding an extra floor to a building. Glaeser, Gyourko, and Saks (2005) argue that New York's housing industry is described well by the standard competitive model that predicts that, in the absence of regulation, high-rise buildings will be

17. In their summary of relevant literature, Burge, Nelson, and Matthews (2007) point out that revenue from impact fees can be used to lower property taxes and fund infrastructure, benefits that are capitalized into housing prices. The authors note empirical evidence that impact fees have the greatest price effects on higher-quality homes, where some studies find a dollar in fees to be correlated with more than a dollar in sales prices. Burge, Nelson, and Matthews attribute this finding to a capitalization of benefits rather than a pass through of fees, but it may indicate reverse causality between home values and the magnitude of impact fees. If valuable housing development is also highly profitable, cities can extract higher fees from it without dissuading building, causing the bulk of high-value homes in any data set to also have high fees.

tall enough that condominiums should sell at their marginal costs. They find that condominium prices tend to be above reasonable estimates of marginal costs, and attribute this discrepancy to regulation.

Further studies of housing markets in urban Massachusetts (Glaeser and Ward, 2009), California (Quigley and Raphael, 2005), and Florida (Ihlanfeldt, 2007) have consistent results: stringent land-use controls are associated with higher home prices and reduced supply.

Recent work has shown that policies taking potential uses of land off the table can lower its value. One example of such a policy is Ontario's Greenbelt, a ring of rural land outside of Toronto, much of which must remain designated as agricultural use. Deaton and Vyn (2010) estimate that, when this policy came into effect, farms near the Greenbelt's border lost 25% of their sale value along with their right to subdivide into homes.

In their recent study, Turner, Haughwout, and van der Klaauw (2014) reconcile the findings of the literature on the economic outcomes of land-use regulation, identifying three ways these regulations affect communities. They point out that land-use regulations can prevent conflicts between neighbours and preserve local amenities, a positive external effect. Regulation also takes possible uses of land from owners, an own-lot effect with negative consequences. Finally, regulation reduces the supply of housing by making some land more difficult, or even impossible, to develop into residential use. Turner, Haughwout, and van der Klaauw propose that regulation is only beneficial if its external effect outweighs its own-lot and supply effects.

Using data on land values and land-use regulations from across the United States, Turner, Haughwout, and van der Klaauw (2014) conclude that, in practice, land-use regulation has done more harm than good. They identify regulation's own-lot effect by focusing on land values on opposite sides of municipal borders. These parcels of land are in different cities and subject to different regulations, but only meters apart, sharing neighbourhoods and combined external effects of both cities' regulations. Regulation's external effect is estimated by comparing land values of parcels at the city's border with those a few hundred meters further into the city, which are isolated from the differently regulated abutting city. Estimates of regulation's supply effect are based on the relative scarcity of developed land in more heavily regulated cities. Turner, Haughwout, and van der Klaauw's estimates of regulation's external effect are typically indistinguishable from zero, and sometimes paradoxically negative. Density restrictions are the sole exception; there is weak evidence that restrictions on minimum lot size have positive external effects. Turner, Haughwout, and van der Klaauw find negative estimates of regulation's own-lot and supply effects, concluding that they systematically outweigh the external benefits.

Appendix 2. Constructing the Index

The first step in constructing the Index of Residential Land-Use Regulation was the careful selection of its components. If any two components of the index are perfectly correlated, they may measure the same effect: adding them both would essentially be double counting. **Table A.1** presents measures of the correlation between the five main, and single omitted,¹⁸ measures of regulation discussed in section 3.

Table A.1: Correlations between measures of regulation

	Approval Timelines	Cost and Fees	Council and Community	Timeline Uncertainty	Planning Objectives	Rezoning Index
Approval Timelines	1					
Costs and Fees	0.61	1				
Council and Community	0.76	0.46	1			
Timeline Uncertainty	0.8	0.44	0.66	1		
Planning Objectives	0.76	0.47	1	0.66	1	
Rezoning Index	0.13	-0.16	0.28	0.17	0.28	1

Note: This table presents Pearson correlation coefficients computed across cities of the Lower Mainland.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

The measures of regulation we derived from our survey are, in general, positively related across the cities for which we compute an index of regulation. As noted at the end of section 3.5, responses to a question about planning objectives are highly correlated with the council and community index. We do not use our measure of the effect of planning objectives when constructing an aggregate index. The rezoning index appears to be the most unique, positively correlated with measures of council and community opposition and exhibiting a negative relationship with regulatory costs. Average approval timelines are positively correlated with all other measures, its correlation with timeline uncertainty is particularly strong.

¹⁸ See the conclusion of section 3.4 and the progression of Appendix 2 for a discussion of the omitted measure of regulation.

We use the standardized sum¹⁹ of the Average Approval Timelines, Timeline Uncertainty, Cost and Fees, Rezoning, and Council and Community Indices as our Index of Residential Land-Use Regulation. For each city, this index captures the frequency, and severity, of deviations from average levels of each of its components in the Lower Mainland. This index is centered around zero, positive for cities that score worse than average on many components of regulation, and negative for cities that score better than average.

19. We standardize each component of our index by subtracting its mean (calculated using cities included in the overall index) and dividing by its standard deviation (calculated using the same cities). Each city is assigned an index value by summing across the standardized components.

Appendix 3. Calculating Effective Population Density and Intensification

Intensification can be measured as the change in a city’s effective population density—the density at which people typically live. We measure effective density and intensification using census population counts within Canadian cities in 2006 and 2011. Standard population density simply measures the number of people per square kilometre, understating the effective density of cities where geographical or policy constraints create pockets of uninhabited land. We use a measure of effective population density commonly referred to as the population-weighted density. As a weighted average of neighbourhood population densities, with weights given by each neighbourhood’s share of the city’s population, population-weighted density is an accurate measure of the effective living density in a city (United States Census Bureau, 2012).

To calculate effective density, we obtained population counts and land areas for census dissemination areas (DA) from the 2006 and 2011 censuses (Statistics Canada, 2006, 2011). DAs are relatively small regions that conform to census subdivision boundaries, which correspond to municipalities in our sample. The 2011 census data describe 56,204 DAs for the Lower Mainland of British Columbia, 992 of which are in the city of Vancouver. The effective density of each city c in census year t is,

$$\sum_{i=1}^{n_{ct}} \left[\frac{\text{population}_{ict}}{\sum_{i=1}^{n_{ct}} \text{population}_{ict}} \text{density}_{ict} \right],$$

the DAs in each city and census year are indexed by $i = 1, 2, \dots, n_{ct}$. This measure is a weighted average of DA densities, where each DA’s weight is proportional to its share of the city’s population. The first two columns of [table A.2](#) presents the effective density of selected Lower Mainland cities.

Intensification over the 5-year period between censuses is calculated for each city as the change in effective density from 2011 to 2006. Since this analysis is based entirely on readily available data, we are unable to calculate intensification in cities whose boundaries moved substantially between the 2011 and 2006 census and compute intensification only in cities where the 2011 land area had changed by no more than 2.5% since 2006. The cities omitted due to border changes are concentrated in Alberta; Abbotsford is the only British Columbian city omitted for this reason.

Table A.2: Effective population density in selected Lower Mainland cities

	Effective population density		Intensification
	2006	2011	
Maple Ridge	2,130	2,238	107
Coquitlam	3,946	4,155	209
Langley Township	1,838	2,053	215
Richmond	5,836	6,152	316
City of North Vancouver	7,877	8,250	373
Burnaby	6,323	6,806	484
Surrey	3,575	4,097	523
Vancouver	10,140	10,664	524

Sources: Statistics Canada, 2011, 2006; authors' calculations.

Table A.3 summarises our measure of intensification and the final column of table A.2 presents values for selected Lower Mainland cities. While some cities effectively grew less dense between 2006 and 2011, there is a tendency towards intensification in the cities where we measure costs and fees. Mississauga, Ontario and the District of North Vancouver intensified enormously over the sample period, severely skewing the distribution; we omit them from further analysis. Cities in the top quarter of our intensification measure appear to be largely those that were densest in 2006.

Table A.3: Summary statistics for intensification in cities with preliminary ratings on the Cost and Fees Index (CFI)

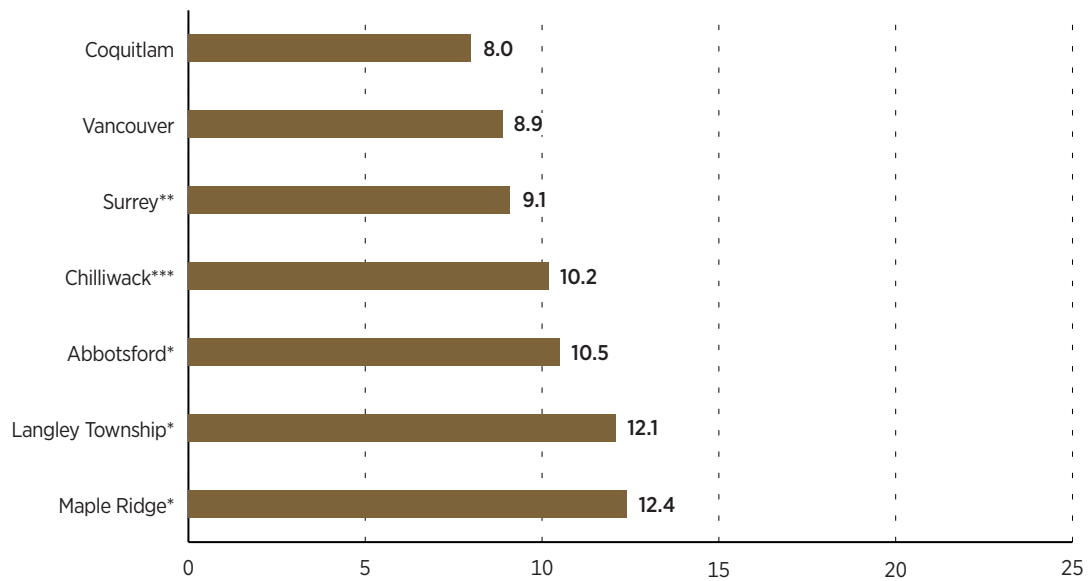
	Intensification quartile ²	Intensification range ³	Effective population density (cross-city average, 2006)
	Bottom	-274 to -64	3,658
Cities with Intensification below 1000 (N = 53) ¹	Second	-64 to 19	2,505
	Third	19 to 265	2,215
	Top	265 to 545	4,998

Notes: **1.** Mississauga, Ontario (CFI = \$52,803, Intensification = 3,905) and the District of North Vancouver (CFI = \$40,000, Intensification = 1,929) have been removed. **2.** Intensification quartiles are the 4 bins that split the sample evenly after it has been lined up according to our intensification measure. **3.** The ranges presented are the minimum and maximum values of each quartile.

Sources: Statistics Canada, 2011, 2006; authors' calculations.

Appendix 4. Approval Timelines by Housing Type and Rezoning

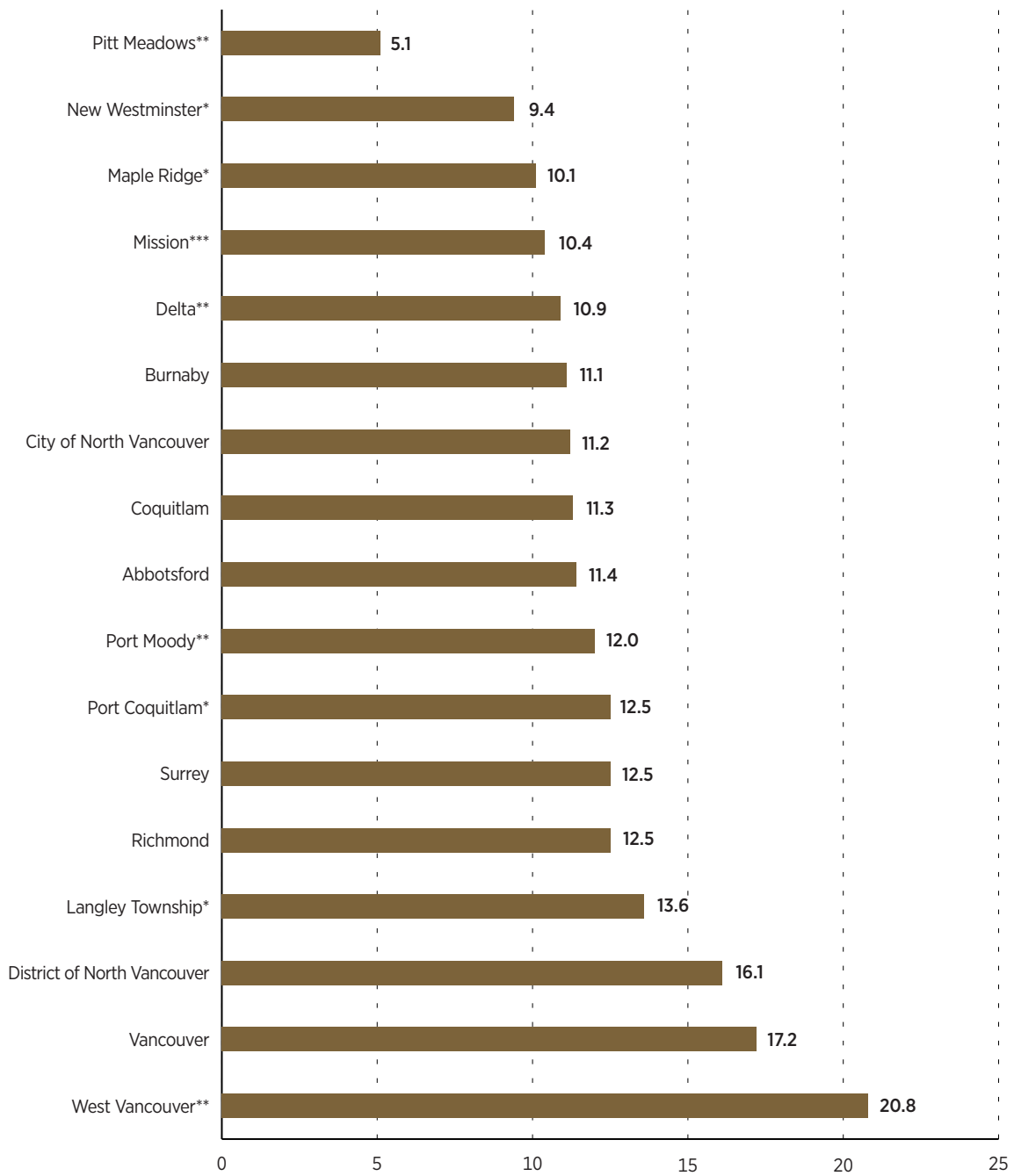
Figure A1: Average approval timelines in BC's Lower Mainland for single-family development, in months



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

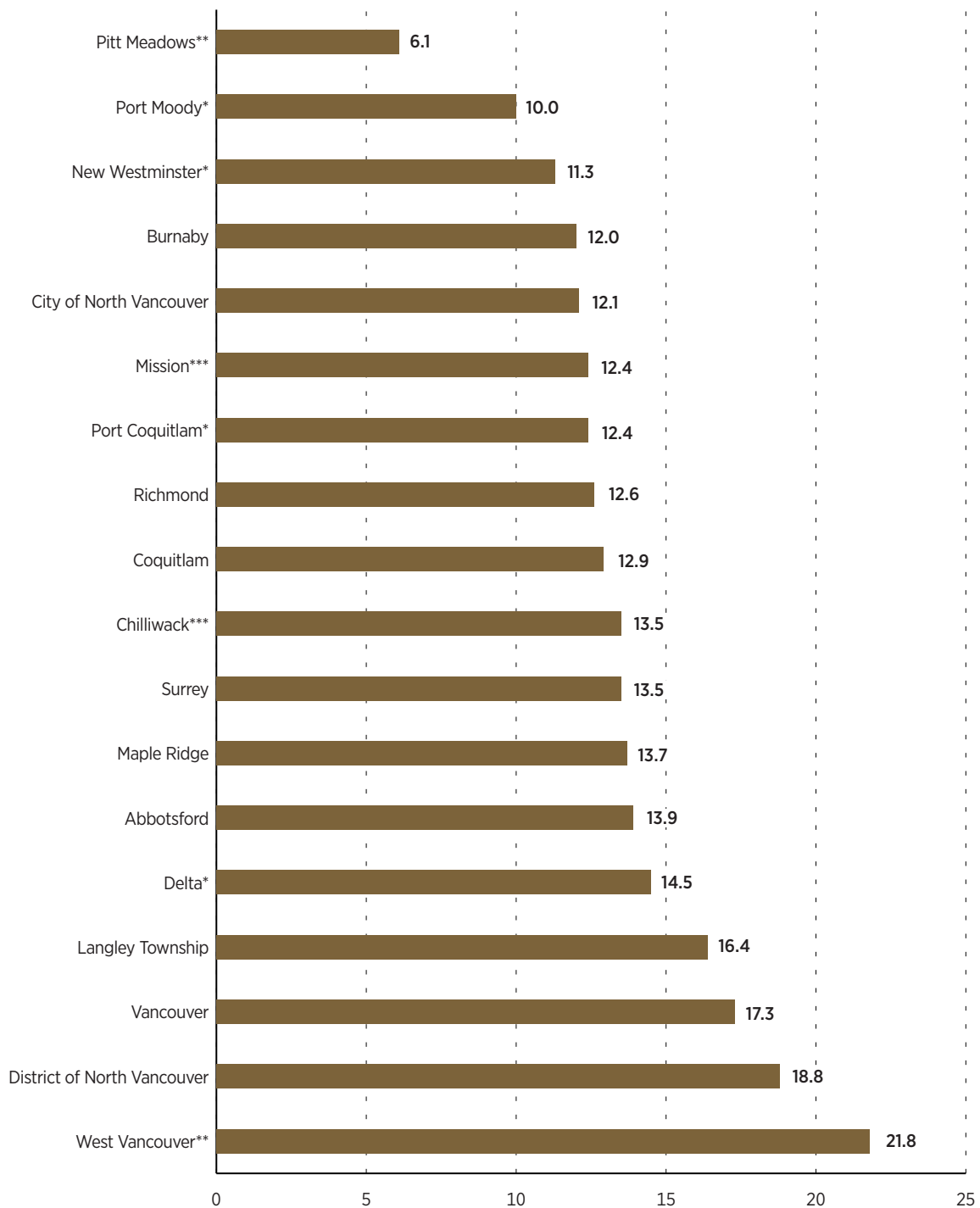
Figure A2: Average approval timelines in BC's Lower Mainland for multiple dwelling development, in months



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

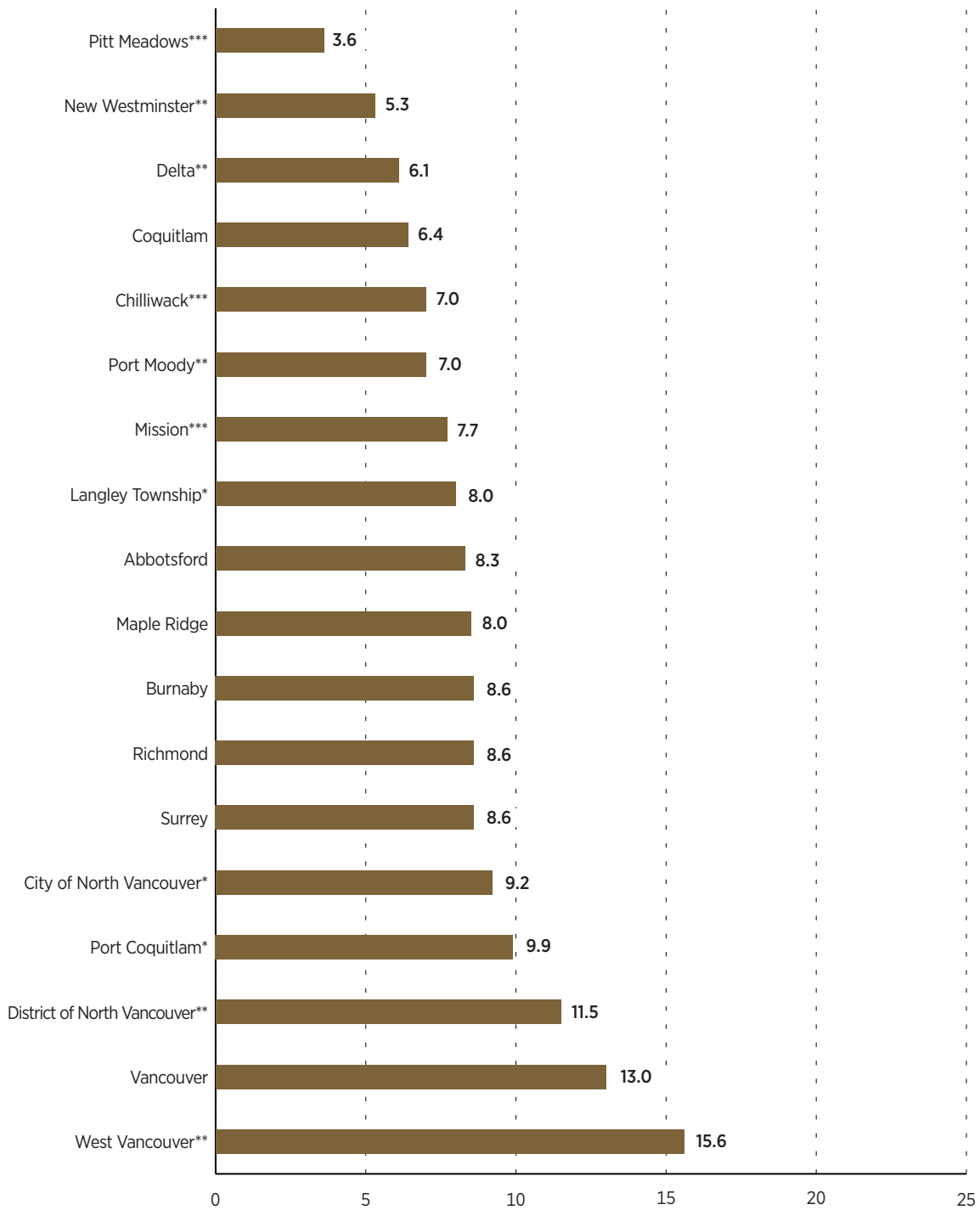
Figure A3: Average approval timelines in BC's Lower Mainland for development requiring rezoning, in months



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

Figure A4: Average approval timelines in BC's Lower Mainland for development not requiring rezoning, in months

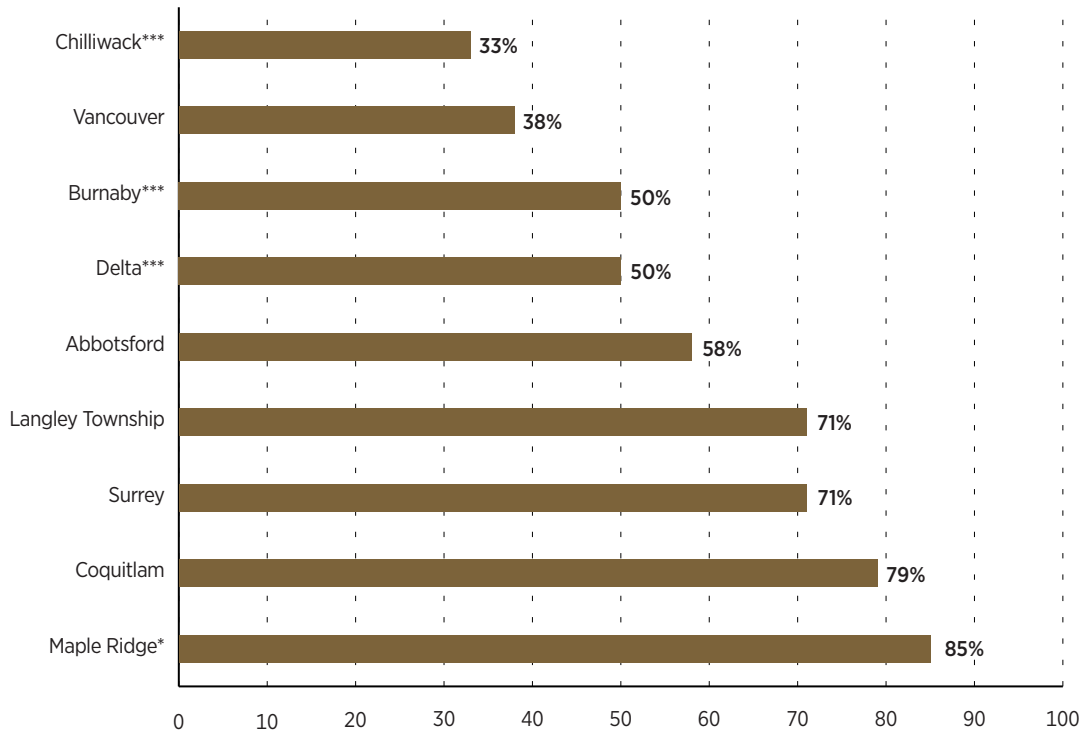


Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

Appendix 5. Rezoning by Housing Type

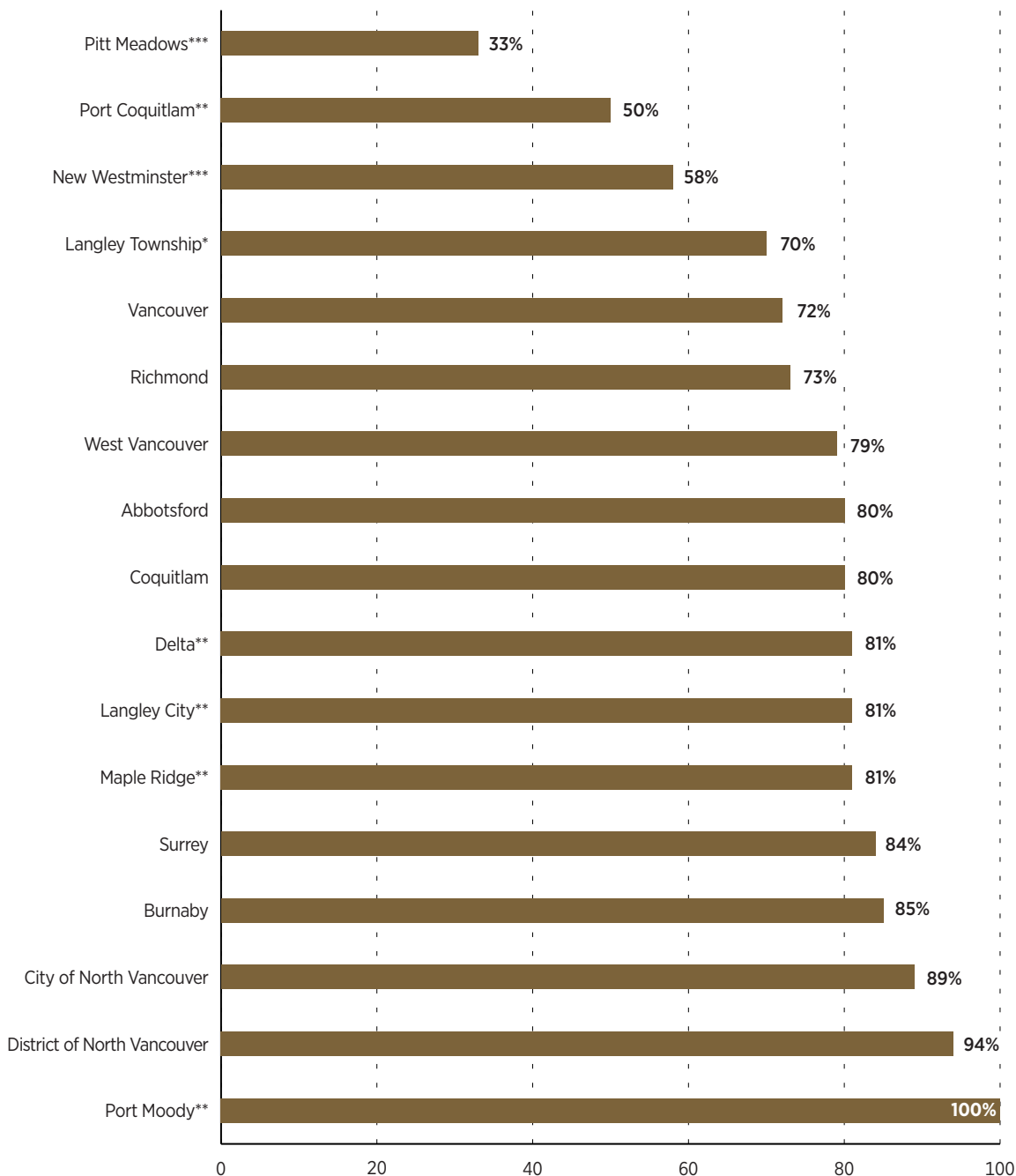
Figure A5: The Rezoning Index (%) for single-family development in BC's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

Figure A6: The Rezoning Index (%) for multiple dwelling development in BC's Lower Mainland



Note: *** = 3 responses; ** = 4 responses; * = 5 responses.

Sources: Fraser Institute Survey of Land-Use Regulation; authors' calculations.

Appendix 6. Survey Questions

Note: questions 6, 7, 8, 9, 10, and 11 are replicated for MULTIPLE DWELLING developments.

- 1** Please go through the following regions and select those with cities that you are FAMILIAR with (in terms of residential development). Please select AS MANY AS POSSIBLE.

Respondents were presented with 19 regions to choose from.

- 2** What type of work does your organization do? (Check all that apply)

The options include land development, new home building, legal services, engineering, architecture and design, and other.

- 3** What TYPES of development projects has your organization worked on in the past 10 years? (Check all that apply)

The options include "Single-Family" and "Multiple Dwelling", both of which were described in more detail.

- 4** Please go through the following cities and select those that you are FAMILIAR with. Please select AS MANY AS POSSIBLE.

Respondents were presented with all cities available within the region(s) selected.

- 5** Does your organization rezone property?

Yes/no answer.

- 6** Approximately how often do your SINGLE-FAMILY developments REQUIRE REZONING in each city?

Respondents select from a 5-bin range from "Never" to "Always".

- 7** Approximately how much TIME do you expect to spend getting PROJECT APPROVAL for standard SINGLE-FAMILY projects that REQUIRE REZONING in each city? From the filing date of the first stage of the approval process to the day you would be allowed to begin construction.

Respondents select from a 7-bin range from "2 months or less" to "24 months or more", with the option of manually inputting a longer timeline.

- 8** Approximately how much TIME do you expect to spend getting PROJECT APPROVAL for standard SINGLE-FAMILY projects that DO NOT REQUIRE

REZONING in each city? From the filing date of the first stage of the approval process to the day you would be allowed to begin construction.

Respondents select from a 7-bin range from “2 months or less” to “24 months or more”, with the option of manually inputting a longer timeline.

- 9** At the outset of your standard SINGLE-FAMILY projects, how does the amount of UNCERTAINTY in the TIME needed for the project APPROVAL PROCESS affect development in each city?

Respondents select from a 5-bin range from “Encourages development” to “Would not pursue development due to this factor”.

- 10** For your standard SINGLE-FAMILY projects, which of the following BEST APPROXIMATES the COST (per dwelling unit) of the PROJECT APPROVAL and REGULATORY COMPLIANCE process in each city? Please give a rough estimate that includes ALL ADMINISTRATION, PROCESSING, and DIRECT COMPLIANCE COSTS (permitting and review fees, community amenity contributions, development cost levies, inspection costs, relevant legal fees, etc.). There is no need to refer to a *pro forma* or other detailed records; a thoughtful estimate is sufficient.

Respondents select from a 7-bin range from “Less than \$1,000 per unit” to “More than \$75,000 per unit”, with the option of manually inputting a higher per-unit cost.

- 11** How do local COUNCIL and COMMUNITY groups affect your SINGLE-FAMILY development in each city?

Respondents select from a 5-bin range from “Encourages development” to “Would not pursue development due to this factor”.

- 12** In general, how do current OFFICIAL PLANNING OBJECTIVES and ZONING BYLAWS affect residential development in each city?

Respondents select from a 5-bin range from “Encourages development” to “Would not pursue development due to this factor”.

- 13** Are there any other comments or relevant information that you wish to add?

An open comment box was provided to respondents.

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About the authors

Kenneth P. Green

Kenneth P. Green is Senior Director of Natural Resources at the Fraser Institute. He received his doctorate in Environmental Science and Engineering from the University of California, Los Angeles (UCLA), an MS in Molecular Genetics from San Diego State University, and a BS Biology from UCLA. Dr. Green has studied public policy involving risk, regulation, and the environment for more than 16 years at public policy research institutions across North America. He has an extensive publication list of policy studies, magazine articles, opinion columns, book and encyclopedia chapters, and two supplementary text books on climate change and energy policy. Ken's writing has appeared in major newspapers across the US and Canada, and he is a regular presence on both Canadian and American radio and television.



Ian Herzog

Ian Herzog is an Economist in the Fraser Institute's Center for Risk and Regulation. He holds an M.A. in Economics from the University of Toronto and a B.Sc. from the University of Guelph. His research spans a wide range of public policy issues, particularly the economics of urban policy, energy, and the environment.



Josef Filipowicz

Josef Filipowicz is a Policy Analyst in the Fraser Institute's Centre for Risk and Regulation. He holds an M.A. in Political Science from Wilfrid Laurier University, and a Bachelor of Urban and Regional Planning from Ryerson University. His previous work has focused primarily on municipal and land-use issues such as zoning and urban growth boundaries.



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